

volume 40

Sci-fi & fantasy modeller

Round 2
22" Eagle
Exclusive



2001:
Discovery
Command
Module

Studio Scale
AT-ST

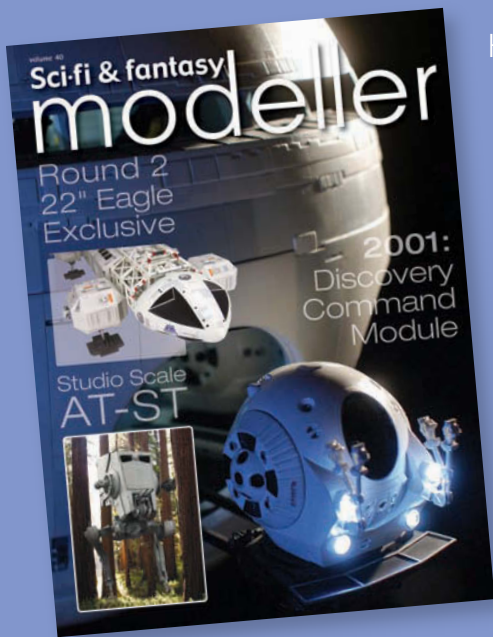


Print editions can be obtained from:
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Volume 40





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Sci-fi & fantasy modeller

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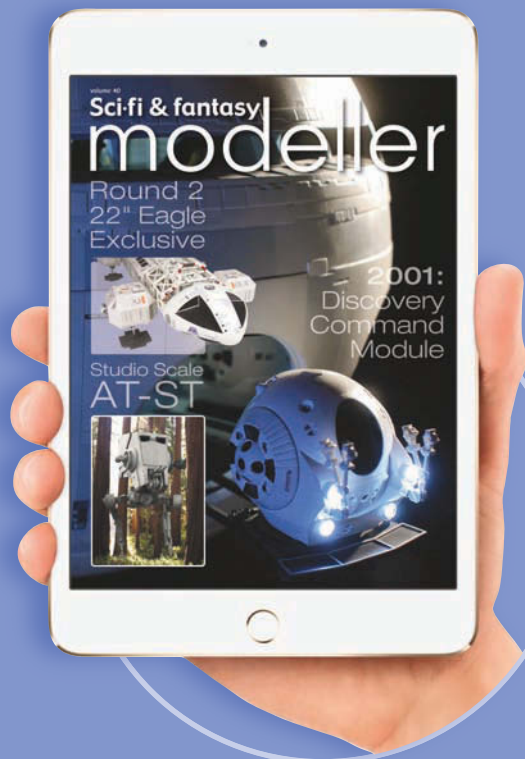
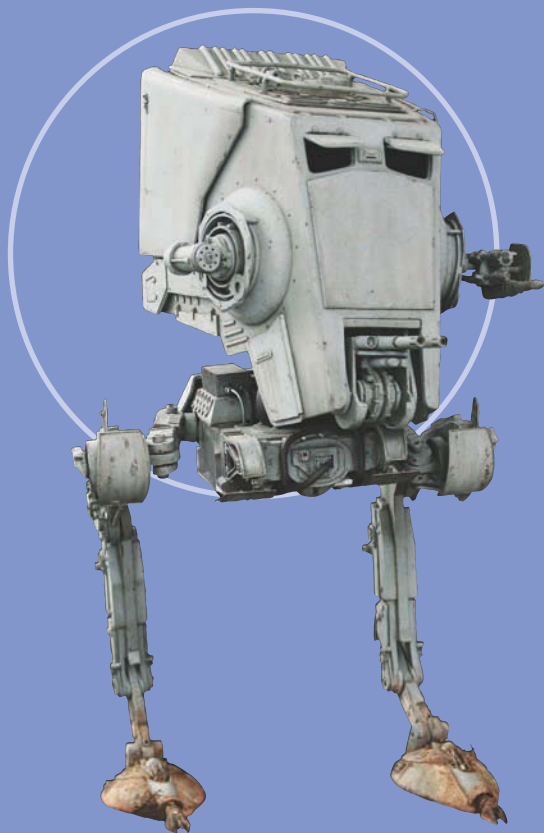
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VOLUME 40 EDITORIAL

Space is always a finite frontier in the editorial section, so, and being uncharacteristically succinct, I've crunched down the vital themes of this issue's editorial into two keywords.



The first is **DIGITAL**.

For some time now you've asked if we might also make digital versions of this title available.

...You command. We obey.

Therefore, in addition to the traditional hard copy you're holding, from this issue onwards you can now also enjoy *Sci-fi & fantasy modeller* *digitally*, together with a selection of our back issues and books that have been unavailable in traditional print form for some time. Our ad on page 29 explains all, and I've got to say *SF&FM* looks absolutely stunning in digital mode... bright colours, special features, extended galleries... (tosses head back, closes eyes and makes wet drooling gargles, *Homer*-style).

And the second keyword?

Well, it's got to be **EAGLE**, hasn't it?

Rarely has a kit set the genre modelling community all

aquiver like MPC's new 22-inch *Eagle* kit, and you can take a very close look at the subject this issue courtesy of the first part of an extensive two-part build article.

...And there's more...

...Because we love *Eagles* just as much as you do, we decided it's high time there was a *Special* dedicated entirely to all aspects of modelling this iconic TV spacecraft... and so we've produced one. It's proving to be extremely popular, so right now would be a good time to check out the ad on page 78 bringing you full details of *Modelling The Eagle*.

Right – time for me to bow out and let the contents of Volume 40 speak for themselves.

See you traditionally – and digitally – in ninety, and thank you, as always, for reading.

Michael G. Reccia
Editor-In-Chief

PS – This issue marks our *tenth* year in print! Time flies and please send birthday cakes and other delicacies to the editorial address!

Errata (volume 39, page 72): *Shen's Engineering* should have read *Shen's Imagineering*.



Follow us on Facebook [<http://www.facebook.com/pages/Scifi-fantasy-modeller/110020029085161>] and Twitter [<http://twitter.com/#!/SffModeller>].

HOT FROM THE MOULD

ROUNDING UP WHAT'S NEW AND HAPPENING IN SF AND FANTASY MODELLING

ROUND 2

Jamie Hood shares his first-half 2016 kit release schedule with us:

January:

...sees the release of AMT947/12 – the *Classic AMT U.S.S. Enterprise 50th Anniversary Commemorative Edition*. The 18" kit we all know and love will feature a special packaging treatment to celebrate the anniversary. We are also updating the kit to use our standard dome base and pressure sensitive decals (stickers) will be included to apply the ship's markings as an alternative to the also-supplied standard water-slide decals.

February:

AMT949/12 *Klingon Bird-of-Prey*. This is a reissue that will include all of the upgrades (accursed wing baffles, landing gear, etc.) we made to the kit for its last release.

POL941/12 *Headless Horseman*. We reported this as a 2015 release last issue, but it slid back a bit.

March:

AMY948/12 *Batwing*. Pretty much a straight re-issue, but we'll include a metal rod for the base and we'll revise the decals a bit, add a cardboard backdrop and give it a nice, spiffy-looking package.

POL942/06 *Wicked Witch of the West* pre-painted kit. We are offering this kit for those *Wizard of Oz* collectors who are too afraid to get their hands dirty!

POL943/04 *King Kong* pre-painted kit. ...Ditto. These painted kits are just as limited as the unpainted versions issued at the end of 2015.

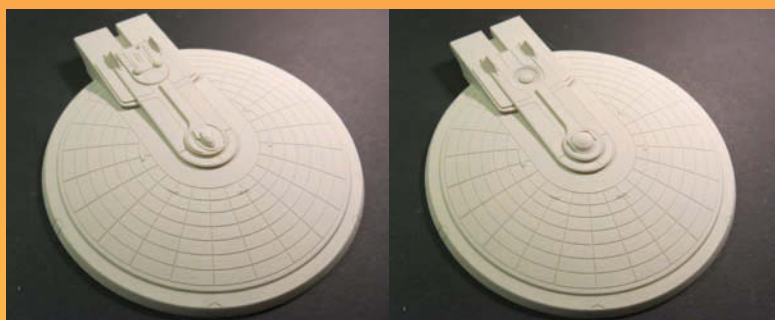
May:

POL944/12 *Harley Quinn VW Beetle*. It's what it sounds like: a *VW Beetle* with *DC Comics'* *Harley Quinn* stickers included to decorate with.

AMT843/12 *U.S.S. Excelsior*. By the time this sees print we should have test shots. Images show the mockups of some of the new parts.

June:

AMT952/12 *Batmissile*. A re-issue with new box art – plus will feature a cardboard backdrop display.



PARAGRAFIX

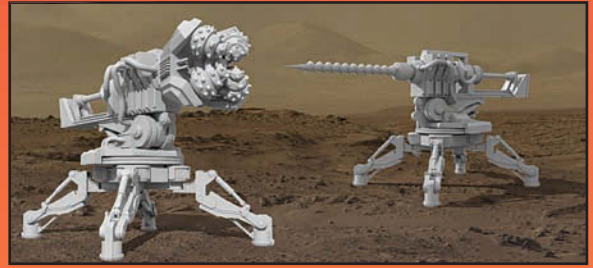
Falcon Corridors Photoetch set

In addition to the enhancement sets for *DeAgostini's Millennium Falcon* kit featured this issue (see article), *Paragrafix* have released a third set, allowing modellers to superdetail the *Falcon's* corridors. Flooring features the 'grab insets' in the tiles and two removable panels (two sets are included so they can be shown removed or installed, but still flush to rest of floor). The control panels behind the banquette seating and the small one at the end of the banquette where the last three seat back sections should be left off the kit are also featured, plus baseboard lighting grills so the floor may be lit, and round wall sconce bases, suitable for lighting (sconces may be upgraded by adding tubing or rod). MSRP: \$36.95.

M.L.E.V.-5 Photoetch set

For use with *Pegasus Hobbies' new M.L.E.V.-5* kit, the set features ladders, air vents, tracks for the command chairs, rocket nozzle inserts, new control panels suitable for lighting and other enhancements designed in conjunction with the kit's creator, Randy Cooper, and with the cooperation of *Pegasus Hobbies*. MSRP: \$44.95.

WILDHOUSE



Mining Rig for Hostile Realms

Wildhouse have announced a new SF kit for *Hostile Realms* (see 3D render of their 1:24 *Mining Rig* above). They are also planning to sell this kit with a 1:24 scale mining figure. The *Rig* will come with three different drill heads and comprise around 25 parts plus figure, and modellers will be able to pose the kit in different positions to suit how you they wish to assemble and show off the finished model. Apart from the 'dome' drill head shown, the *Rig* will also feature a long, traditional drillbit plus a rotating set of bits for more aggressive rock!

The rear of the unit features the main drive train engine and control circuits, and the leg assembly for each foot will enable modellers to raise or lower the main unit. The base will also rotate fully around the leg assembly so the *Rig* can be turned into varying positions.

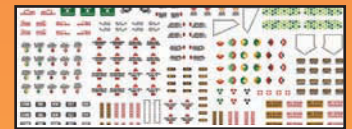
TITAN FIND



New from *Titan Find*, who have created a number of *Blake's 7* ship subjects in recent years, is a studio scale kit of *The London*, the prison ship that was transporting *Blake* to *Cygnus Alpha*. *The London* measures 15.5"L x 13"W x 8"H and is priced at \$275 plus shipping and handling. Details from: titanfind@gmail.com

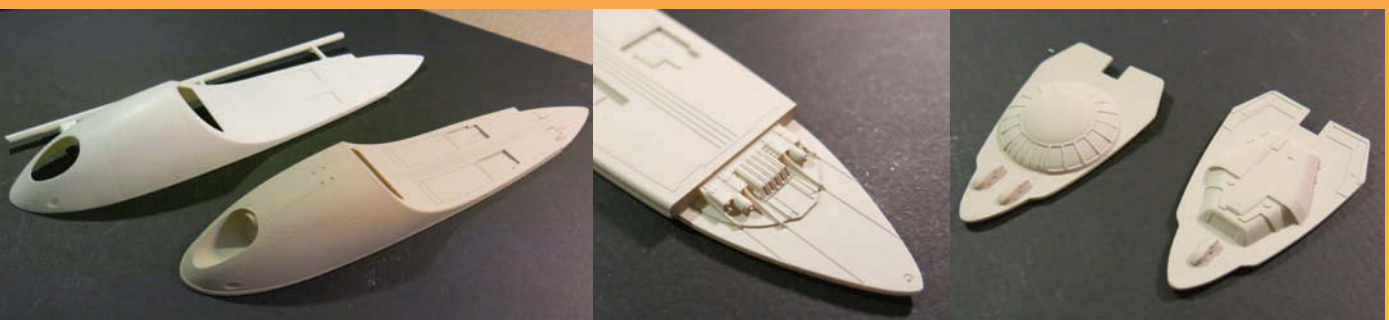
Hover Bike Decals

Final artwork for the *ORCA Hover Bike decals* set has been created and



high definition decals for the model will be available soon. A variety of different designs reflect both the Civilian and Military versions, plus extra spare decals will be included in the set. The decals will also be sold as a separate item from the *Wildhouse* store for use with other kits.

www.wildhousemodels.com



REVELL

As *The Force Awakens* hits cinema screens, *Revell* have released a range of *Star Wars* kits based on the movie, designed to appeal to fans of every generation and model makers of varying ages and skill levels. To broaden the appeal of the hobby in an increasingly electronic world, *Revell* is extending their new concept in model building for children aged 6+: *Build & Play Star Wars*. These easy-to-assemble kits snap together with no glue, paint or tools needed for assembly. Each large kit features three different sound clips and some feature light effects, and on completion the models become durable, fully functioning toys. The range includes the *Millennium Falcon* (21cm, 19 parts), *First Order Special Forces TIE Fighter* (13cm, 15 parts), *Poe's X-wing* (22cm, 18 parts); and the *Resistance X-wing* (22cm, 18 parts).

Revell's new *Easykit Star Wars* models for modellers aged 8+ and over feature pre-painted parts that clip together with no gluing required. The range includes even larger versions of the *Build & Play* kits plus *Kylo Ren's Command Shuttle* (18cm, 53 parts).

Finally, the company has just released its range of *Star Wars* kits for ages 10+. These more challenging subjects in various scales require gluing and painting and feature finely engraved surfaces, replica cockpits, selected figures and selected display stands. The range includes the *Millennium Falcon*, *X-wing*, *Darth Vader's TIE Fighter*, *TIE Fighter*, *TIE Interceptor* and *Snowspeeder*. Available from all good toy and model stores.

Details from www.revell.de/en, @RevellGermany or facebook.com/revell



continued page 76!



RETRO ROCKET

Andy Pearson takes us back to the future

Manufacturer: Herb Deeks Models—Past Future Series™.

Material: Resin.

Scale: 1:72.

THIS IS A KIT I'VE WANTED TO GET MY HANDS ON FOR, LITERALLY, DECADES. I FIRST CAME ACROSS IT IN THE PAGES OF *FILMFAX* and rediscovered the advertisement for the model when a recent bookcase collapse revealed an issue of that very magazine dating from the mid 1990s.

Below:
the box, its
contents and
the key
accessories.

Rocket
exhausts in
need of some
work.

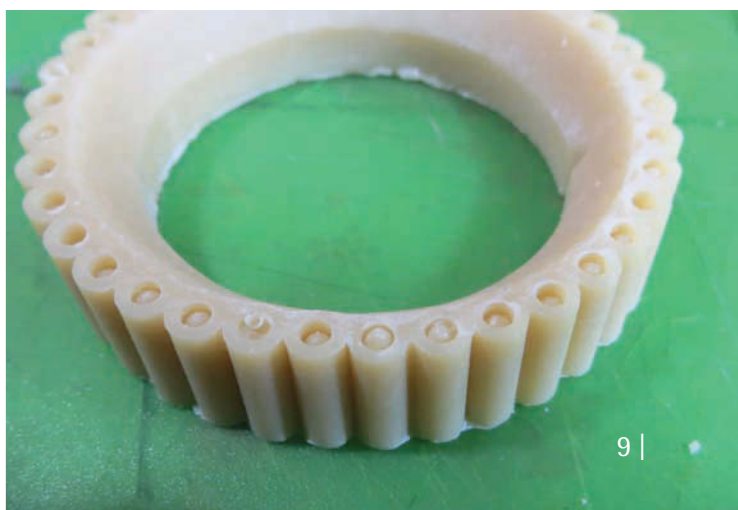
Very shortly after that I attended the *UK Garage Kit* show in my official capacity and there, on a dealer table opposite, was the very kit. In truth it was a little expensive given how the personal finances stood at the time but, as the hour of closure for the show approached, I was able to negotiate a substantial discount.

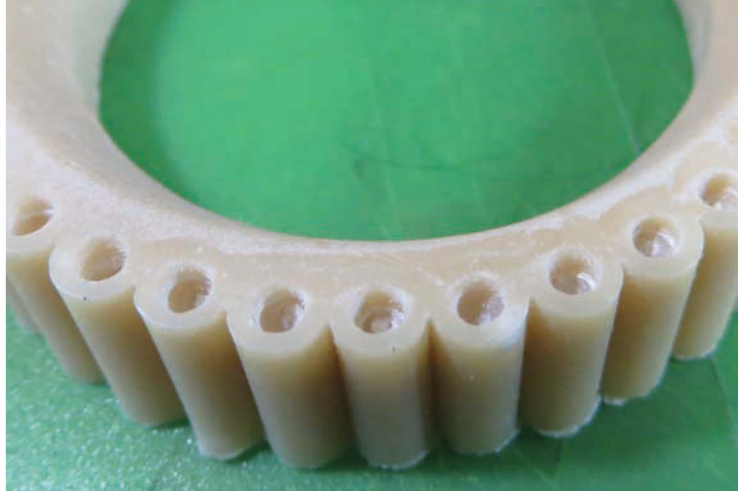
The kit itself dates, I believe, from 1985 which makes it something of an antique but this does nothing to detract from its appeal, particularly to modellers of a certain vintage.

The model is probably best remembered as *Dr Zarkoff's* spaceship from the *Flash Gordon* serials but I believe it started life in a movie entitled *Just Imagine* from 1930.

Having cleared the decks of other modelling projects I began to examine the kit and was pleasantly surprised by the quality of the finish, as older resin kits usually require lots of filler and an equal amount of patience. Certainly there was some work required and the hatchway in particular would need some attention but nothing too taxing.

I began a general cleanup using fine abrasive paper and taking suitable precautions as breathing



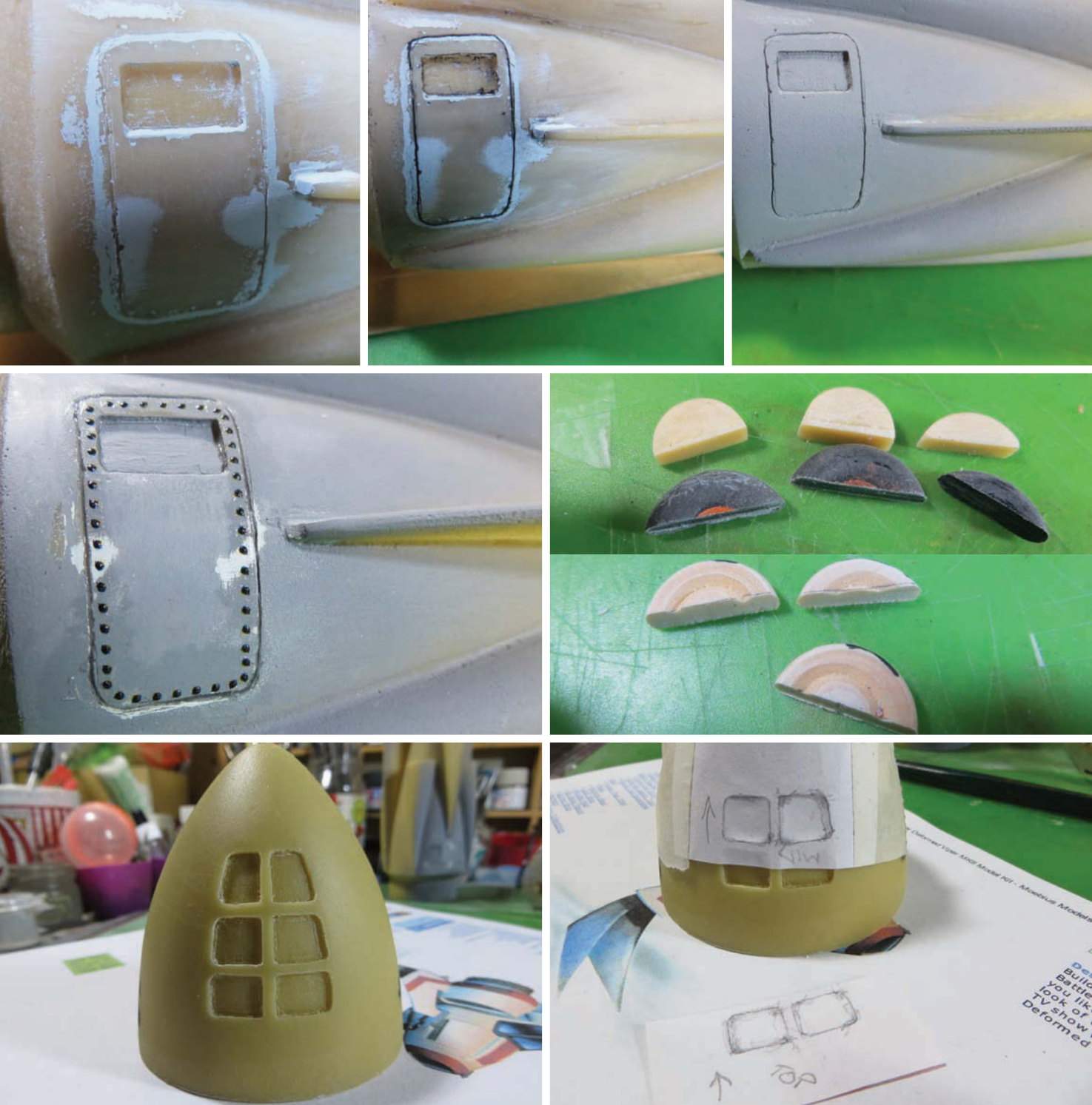


Top: hatchway also needing some attention. Repair to rocket tubes.
Centre: filler to hatch and fin. Above: main areas needing filler. Hatchway filled and smoothed.

in resin dust is something to be avoided. Apart from using a dust mask I find using wet and dry abrasive paper with lots of water helps and also aids the quality of finish.

The main rocket nacelles needed to be opened up and the edges of the rocket motor outlets cleaned up. The ring of small rockets round the

rear of the nosecone also needed some attention, which brought me to the hatch. The moulded line demarcating this from the hull was somewhat uneven and slightly less than rectangular. That meant filling the moulded line with *Squadron White* putty and smoothing that down which would mean losing the moulded rivets.



Top: scribing new hatch lines. Temporary pin wash to highlight scribing. Primer to hatch.
 Centre: rivet decals. Original wheels (top) with spares box replacements which are too big. Wooden replacement wheels.
 Above: cleaned up window areas. Taking rubbings from windows as size guides.

I had anticipated that and had ordered a set of *Archer Fine Transfers* resin rivets on decal film. These are a brilliant product and, as I've enthused about them elsewhere in this title, I will say nothing more other than that I recommend them highly.

Having said that, the *Archer* product did bring out what a lady acquaintance of mine once referred to as 'mad man with a drill syndrome'. That is essentially a chap with a new toy/tool/accessory who can't resist finding uses for it. This results in holes where they're not really



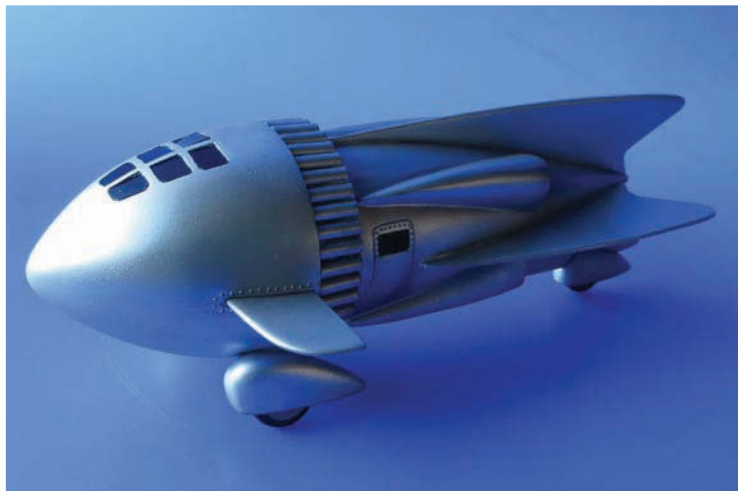
Top: acetate replacement windows. Dry fit of main components. Centre: rivet decals round engine nacelles. Hatch rivets under primer. Above: primed model, sans wings. First coat of aluminium.

needed and, in this case, resin rivets where they're not supposed to go. In my defence I restricted my additional riveting to the ends of the main engine nacelles so it could have been worse.

Whilst the various stages of hatch filling and restoration were drying I turned my attention to the wheels which, whilst a comparative detail,

were probably the kit's weakest point in terms of execution. They were supplied as three semi-circles of resin and I thought something with a little more detail would improve the overall appearance.

A visit to the spares box produced some but they proved not to be of a suitable size. I then found some wooden wheels in a local craft shop that



Top: windows in position. Centre: Replacement wheels fixed to undercarriage.
Above: finished shots—desktop. Overleaf: the location—it's not *Mongo* but it's home.

seemed about right so took a razor saw to three of those and then painted them in aluminium and tyre black.

With the main clean-up and restoration done the whole model was given a couple of coats off grey automotive primer which, as is almost inevitable, threw up some more areas in need of filler.

It was at about this point that I began to consider the best approach to the windows, of which there were six on the nosecone and one in the hatchway. The obvious technique was to fill the recesses for these with gloss black paint but there was an alternative – this being to use clear acetate panels, painted black on the reverse.

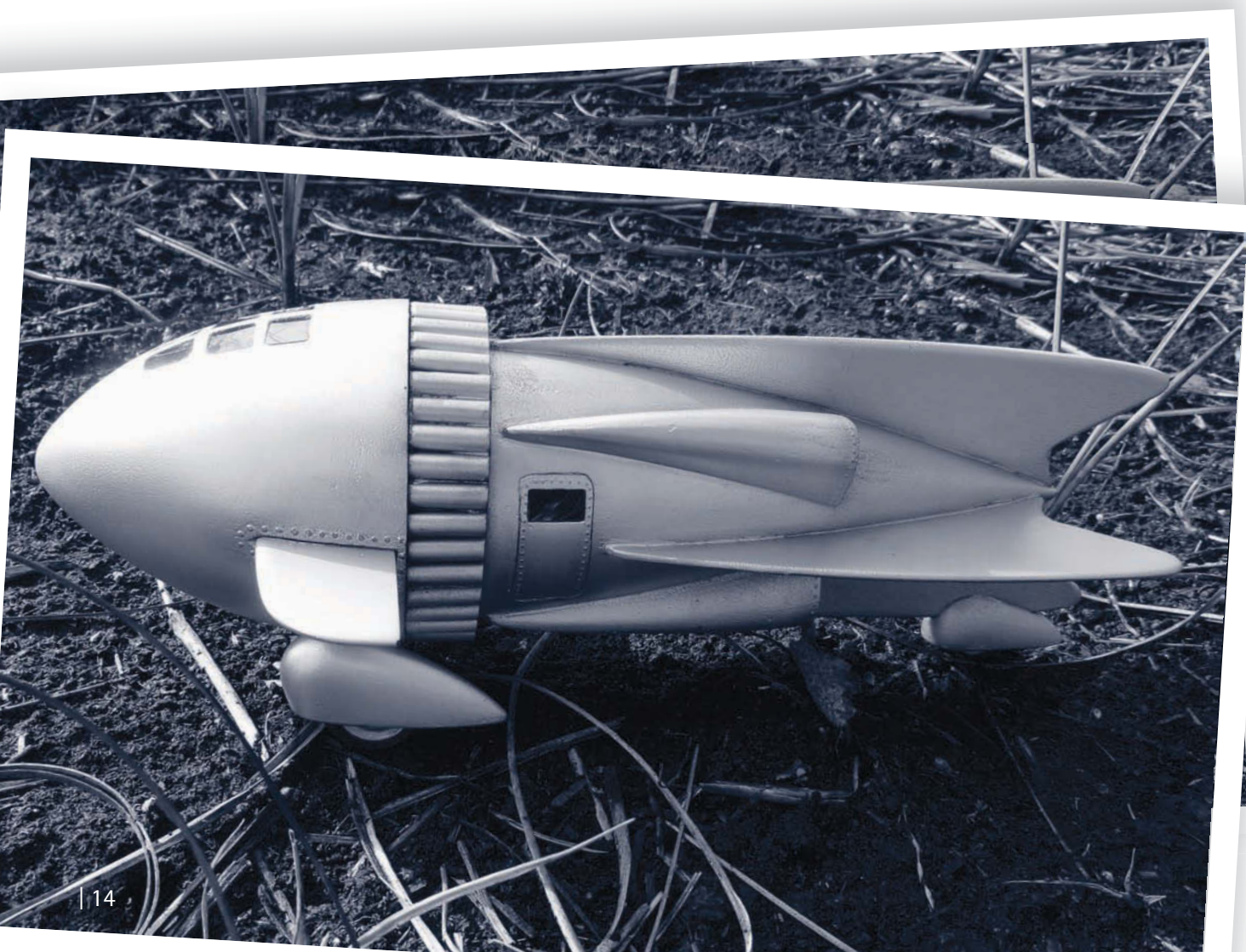
To determine the sizes for these, I used sheets of paper to take pencil rubbings from the window areas, cut the acetate to match and then trimmed each slightly as test fits dictated. The main trick here was to keep track of which acetate panel went in which window recess as there was a tiny variation in sizes, port to starboard.

With the primer dry, I gave the rocketship its first top coat of aluminium paint from a rattle can. As my fellow modellers will know, metallic paints are very unforgiving in terms of highlighting defects so a little more filling and smoothing was needed. I should, perhaps, add that I wasn't going for a mirror finish overall but wanted to reflect the age of the original by having a slightly less than perfect surface. I know that sounds like an excuse for poor workmanship but, trust me, it isn't. At least not on this occasion.

The final assembly of the model was carried out using a two-part epoxy adhesive. As this has a drying time of a few minutes it enabled me to position the undercarriage legs correctly, aided by standing the model on a sheet of glass to ensure that they were of even height.

The acetate windows were positioned using PVA glue as this, again, gave me some time in which to fine tune their positions and, more importantly, didn't attack the paint on the underside of the transparencies. Weathering was kept to a minimum using black pigment powders, particularly round the rocket exhausts, the base of the wheel spats and the riveted areas.

In terms of photography of the final model I took the usual desktop shots and then decided to try some location work. This meant a trip to my second home, *Risley Moss Local Nature Reserve*, where a number of colleagues were involved in a weekend work day. I had cried off this as some of the aged joints were causing a little discomfort but still managed to brave the habitat of the wily viper to find some suitable settings. 'Brave' is probably overstating things as, by early November, our resident reptiles are usually tucked up in their winter quarters and are very shy and retiring at the best of times. This meant I was able to take a number of alfresco shots accompanied only by the occasional overheard remark from my chums along the lines of 'what's the old fool up to now?'



FOR ALL MY LIFE I'VE BEEN A FAN OF GERRY AND SYLVIA ANDERSON'S TV SERIES and have always wanted to own models of the fantastic vehicles seen in the programmes.

As a late developer model-wise I've only recently started building up my collection and the most recent addition is the *Explosives Truck* from the Joe 90 episode *Colonel McClaine*. This model is 'studio scale', which makes it about 18.5 inches long.

The one thing that was going to be a major hurdle from the very start was the wheels – all *twelve* of them. Fortunately I had some good luck and Paul Grey, who has built some great models, came to the rescue and agreed to mould the wheels for me. I have to admit I have no experience with moulding and it's all a bit of mystery to me.

The wheels on this vehicle are modified *Johnny Express Truck* toy wheels. This truck was

available in the mid sixties and weighed in at a massive three feet long. For the *Explosives Truck* the original model makers actually reduced the width of the tyres by about 10mm and, considering there were at least three of these trucks with a total of thirty six wheels and a very short timescale available to construct them in, it's very surprising they went to all this bother.

Paul moulded twenty four half wheels so all I had to do was glue them together. To achieve this I superglued some little 4mm perspex offcuts around one half to create an even distance. To glue the two sides together I just used P38 car body filler; however, to prevent the treads from becoming filled I wrapped masking tape round each wheel so once the filler was dry I could just pull off the tape. There was a lot of cleaning up to do and some repairs, and I used an electric sander to get rid of most of the excess. To strengthen the

An explosive situation

Malcolm Gibb scratchbuilds an impressive transport for a nine-year-old Colonel





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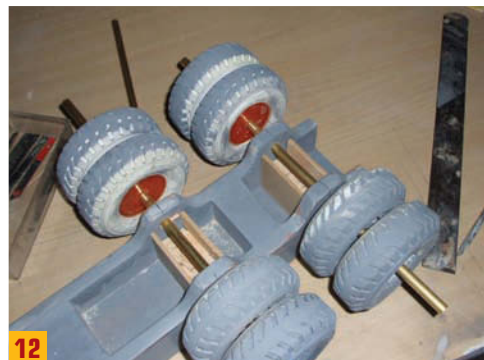
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wheels I poured some fibreglass resin into the backs, which would also help support the brass axles later on. (Photos 1-4.)

After studying lots of reference photographs and watching the episode umpteen times I decided the chassis was quite high off the ground so I came up with a shape which I think is about right. I used 12mm plywood for the chassis as I had it lying around, and once that was dry I covered the whole thing in fibreglass to strengthen it and hide any wood grain.

I've only recently started using fibreglass to cover my models and the benefits are many as, apart from the extra strength, it also prevents any joints opening up, though it does increase the amount of sanding, et cetera required.

The four raised parts are for the two rear axles while the front axle is steerable and therefore required a different mounting. I drilled out the centres of the wheels using a 10mm bit and dry fitted the brass axles to them to see if they looked right. I also decided this model would have a



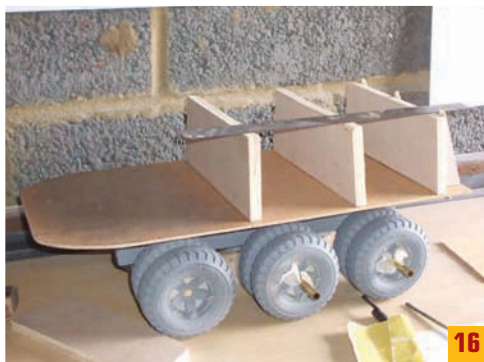
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simple suspension set up very similar to the method used by the original modellers on many of the vehicles. This was achieved simply with a piece of soft rubber or foam which the axles would sit on, plus an elongation of the axle holes to give the axles some vertical movement. To keep the foam in place I build a simple 'U'-shaped part out of scrap wood and the foam I used was cut from those kneeling pads used by gardeners.

The front steering mechanism was cut from aluminium with short brass axles sandwiched in

between and bolted in place. The rest was made up from parts from my old *Meccano* set superglued where needed – as rough as it looks it does work. In case you're wondering I must add that I rarely finish off the underside of a model as it's never seen and the originals were rarely neatly finished off.

I also at this point added some extra details on either side of the chassis to make it more interesting, just using bits and pieces from kits including classic *Girder Bridge* parts. There are no



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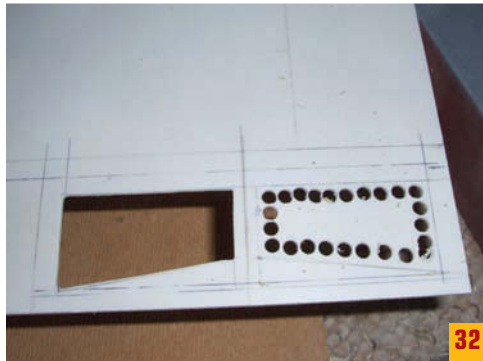
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clear photos of this area on the original so you can use some artistic license. (Photos 5-15.)

The next stage was the body, which I was going to make out of *Perspex* but didn't have enough so instead used 12mm ply for the main supports which were then covered in hardboard. Yes, I know hardboard has a bad reputation but as it would be fibreglassed it didn't matter. The front of this section has two indents on either side which I cut out but did not finish off as I would leave that till a later stage. I worked out the angles and sizes

for the body from photos, et cetera so it was a case of measure fifty times, cut once.

Once the body was dry I sanded it down to smooth off any rough bits and sharpen the edges. I then fibreglassed this and sanded and filled with P38. As you can see I covered up the indents with the fibreglass – a deliberate move as I thought it would make them easier to finish off. I then re-drilled out the indents and filed down the edges using a number of files, sandpaper and even nail files. I then made a little box for each indent and



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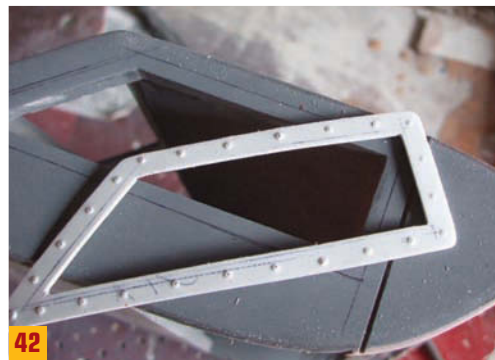
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44a



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glued these in place from the inside via a hole in the front rib. Later I fitted a small piece of *plasticard* in the front at an angle as in the original model.

At this stage I also made a section for under the nose which is angled and slightly wider than the chassis, this again being created from ply and hardboard covered in the usual way. (Photos 16-24.)

It was now the turn of the front section which, because of the curves involved, I'd left until last.

To support the fibreglass I used bits of hardboard and wood offcuts to support a very basic structure. It looked awful but as it would be covered it didn't matter. Some of the curves I couldn't achieve with the wood so I used the fibreglass and filler to make up for it. Before I started I taped over the indents to prevent damage and dirt getting inside. This is the advantage of using fibreglass as it doesn't move and joins don't open up. During this stage I screwed a batten underneath to keep the frame straight and level, adding more fibreglass where



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needed until I achieved the curves, and also covering the underneath of the body with filler to help smooth it off. (Photos 25-28.)

I decided to make the driver's cabin out of *Perspex* as I had just enough for this. As it was a fairly weak area I poured some fibreglass resin into

the nose and rear section to give added strength. Once dry I cut out the side windows using the old fashioned method of drilling lots of holes then filing down (my *Dremel* had packed up). I used *plasticard* to create the front windscreen frame and sanded and filled to blend it in. To make sure



the curve of the cabin followed the curve of the body I used the parcel tape and filler method, which means putting parcel tape on the body and some filler along the bottom edges of the cabin and then pressing it in place. Once dry it's easy to remove the cabin as filler doesn't stick to the tape and, hey presto!, you should have a perfect fit of the two parts. I also shaped the front sections of the body and cabin so they curve into each other and look as if they are one piece. This took some time using filler and lots of sanding. To give the effect of doors I carefully cut ridges in the side panels using my junior hacksaw. (Photos 29-34.)

Above and behind the cabin there are two angled hoods on either side. I first made these out of some *plasticard* but they were too thin, then from *Perspex* but they were too thick. Finally I used some foam board which was easy to glue and shape. Once filler had been added and sanded they blended in quite well. (Photos 35-36.)

With basic construction more or less complete it was time to begin detailing the model. Most of the details are parts from the *Airfix/Dapol Girder* and *Footbridges* and a *Signal Gantry*. One or two parts had to be scratchbuilt out of *plasticard*, *Evergreen* styrene strips and modified *Girder Bridge* pieces. There are even a couple of bits of *Lego* in there, as

on the original. I used more of the *Evergreen* strips to create a ridge along the top and rear of the body and added filler along them so they would look like part of the body. (Photos 37-39.)

The rear end of the body has a 'ridged look' and to achieve this I used *Evergreen* styrene strips 1mm x 4.8mm wide. These took some time to fit as I had to check the gaps were even and horizontal with every strip. (Photos 40-41.)

This model has loads of visible rivets and to achieve these around the separate window frames was quite easy. Once I had cut and shaped the frames from *plasticard* I turned them upside down and, using a sharp point, I gently pressed it into the plastic. If you turn the frames right way up you'll see a rivet effect – using different pressures will create various sizes of rivets. I then gave the rivets a very light sanding to slightly round them off.

The body rivets were a different kettle of fish and were created using an adjustable hole punch. I just punched out holes (1.5mm) on some thin *plasticard* then individually stuck them on the body. There are about seven dozen of them so it takes a bit of time... Afterwards I sanded them down to round them off. (Photos 42-44, 44a.)

The final stage is painting; but before I start I



always wipe everything down with a 'tack' rag which collects dirt and dust. Next I sprayed the rear end of the body with *Halfords White Primer*. Once dry I stuck on the self adhesive letters... as this is a ridged area the letters create a mask for the final colour. Later I peeled off the letters and was left with white lettering. I get my local graphics company to create all my letters for me as they are used to my unusual requests. For the body I used *Tamiya AS9 Dark Green* spray which dries quite quickly. I sprayed the centre of all the wheels using *Plasticote Silver*. Once dry I masked off the centres and sprayed the wheels with *Halfords Matt Black*. The yellow go faster stripe was 3mm self adhesive vinyl. Next I hand-painted some mud effects using *Tamiya XF52 Flat Earth*, which was then toned down by an airbrushing of *Tamiya XF1 Flat Black*. The cabin, which is a separate item, was masked off and sprayed *Halfords Ford Daytona Yellow* then, later, after more masking for the stripes I used *Halfords Matt Black*.

The large side numbers were *Eurostyle Extended* and the front numbers *Eurostyle Bold Extended* which was also used for the side 'Explosives' signs.

Once the graphics were on I just dirtied parts of the model with *Tamiya XF52 Flat Earth* which

was airbrushed on. As I wanted this model to look absolutely filthy as it does at the end of the episode I then brushed on some black powder paint and rubbed it in using my fingers and cloths.

After this was done I decided I had overdone the dirt on the front striped area so I very gently wiped it with a cloth and some white spirit.

I did not make an interior for the cabin so the windows, which were just *Perspex* and slotted in, were very lightly sanded and any dirt was left on. The aerials were brass rods sprayed silver and the rolls of canvas were cut from old jeans. The coils of rope were embroidery thread which I thought looked like rope.

Finally, I could attach the wheels. I cut the brass axles to length and glued some dowel inside. I then used mirror screws with the domes to fix the wheels and that was that. (Photos 45-53.)

The model took me 86.5 hours between December 2014 and May 2015 and cost £186.35. This is a very heavy model due to the twelve solid resin tyres. It comes apart in three sections – chassis – body – cabin, all just dry fit together using dowels.

Of all my projects this turned out to be my all time favourite. Now... if I had more wheels I could build a convoy!



Miranda: /mə'randə/

feminine given name of Latin origin. Meaning: '*worthy of admiration*'.

Rolando Gutierrez scratchbuilds
— and aptly names —
an impressive original design

Starship Tug MIRANDA
J-Class Industrial Starship Tug Mass: 91 metric tons.
Length: 26.67 metres.
Beam: 14.224 metres.
Height: 11.557 metres.
Crew: 4.
Engines: 4 main Roland JR-12 liquid propellant engines.
8 Roland JR-6 liquid propellant thruster engines.
2 Roland JR-2 liquid propellant maneuvering thruster packs.



THIS PROJECT IS ONE I'VE WANTED TO DO FOR QUITE SOME TIME... I've been wanting to create a spaceship using the old-school modelling techniques of some of my favourite movie and TV model makers. I've always admired work by the

model makers at *ILM*, *Apogee*, *McCune Designs* and many others, and I've also admired and tried to emulate the works of famed model makers such as Martin Bower, Lorne Peterson and Bill Pearson, just to name a few.

Row below: main structure with internal support. Fuel cells placement. Styrene panels added to structure.
Bottom row: rear engine box added to structure. Test fitting parts. Test fitting more parts.



Top row: initial placement of the *Dustbuster* vacuum front as a cockpit. Fuel cells with supports placed in fuel bay. Main engine bells added to the rear engine box. Greeblies from various donor kits added to the fuel cell bay.

More greeblies added to the fuel cell bay.

Second row: fuel cell bay in primer. Test fitting fuel cells in primer. Test fitting parts on fuel cells. Parts and piping added to fuel cells. More parts added to the structure.

Third row: radar dish made from lid of disposable food container. Radar mount made from donor parts. Radar dish in primer and in place. Fuel cells and radar dish in place with a fresh coat of primer.

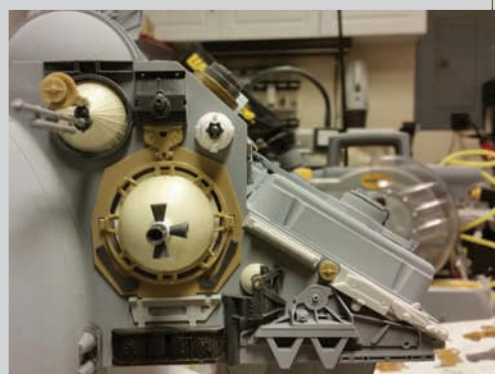
Bottom row: more details and piping added to exterior. Manoeuvring thrusters and other greeblie details added to the front left side. One of two scratchbuilt docks on the side of the ship. Right side manoeuvring thrusters added along with more detail parts.

I don't usually work with any blueprints when I work on a project of my own design and creation. For this project I had a design for a space tug in my head and just decided to go for it. I had a rough idea of what scale I wanted to go with but nothing was set in stone at this point.

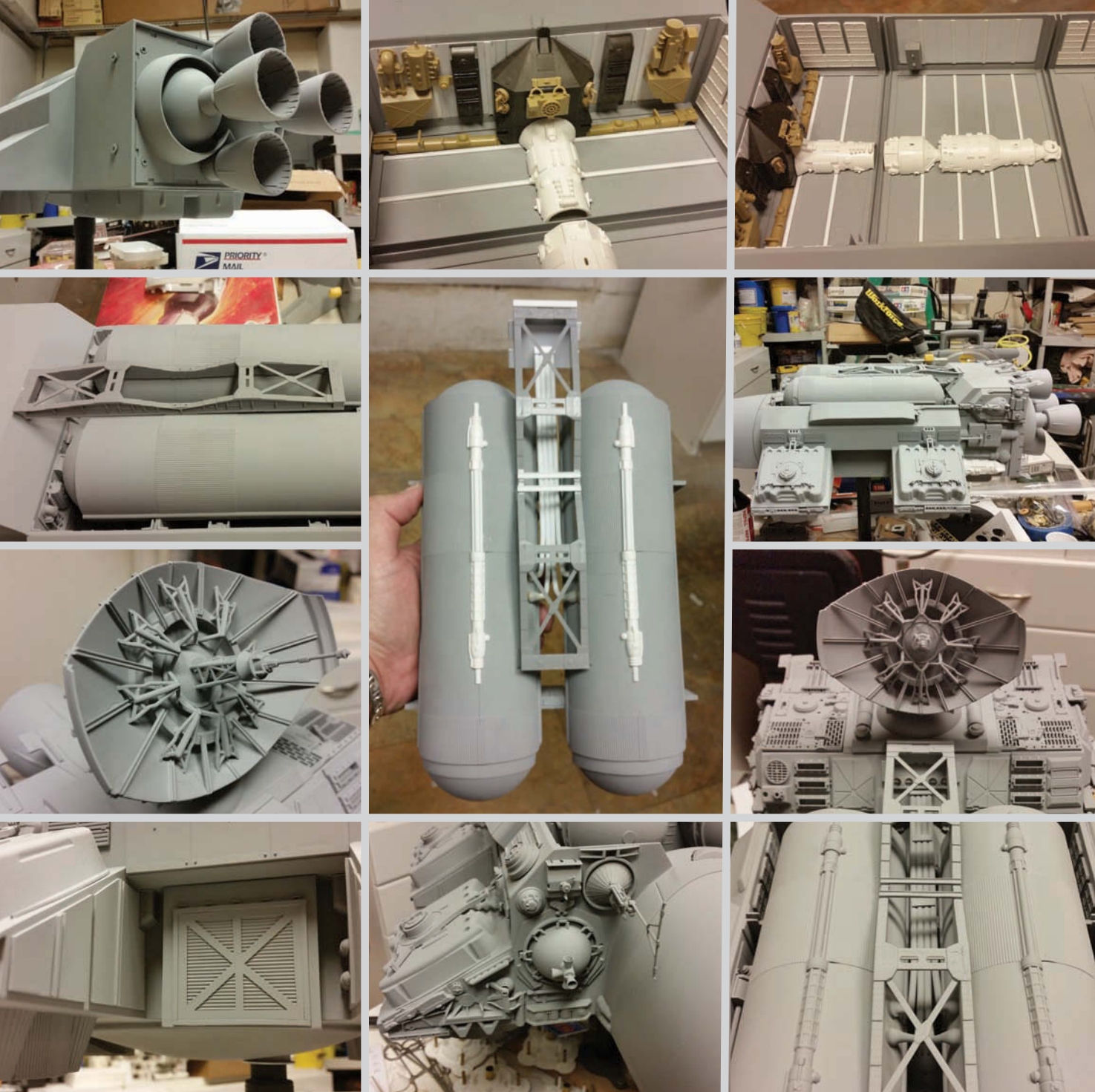
The first step was to create a structural support that would hold everything in place and serve as a mounting point for display purposes. I use CCTV telescopic supports to display my models on bases. The structural support for *Miranda* was made of PVC piping and connecting joints that would support the model to the base.

The ship's body was mainly constructed of acrylic and styrene sheeting that I cut to the shapes I required. I use a variety of cutting, sanding and measuring tools in order to work out the precise measurements needed to get everything to fit correctly. All these parts were then glued in place with the help of styrene supports.

One of the main focal points of the model is the fuel bay that holds the two main fuel cells that I cannibalised from a couple of 1:144 scale *Airfix*



Saturn V rockets. The bay was made to hold both tanks so I added supports to them so that they could slide into cradles for easy removal and access to the fuel bay. The inside of the bay was detailed with cannibalised model kit parts known by many as 'greeblies'. These are model kit parts from a number of different scales, manufacturers and genres. They could come from just about any model kit, be it an aircraft, military armour, auto, truck, ship, and yes, even a spacecraft. What I look for are shapes and anything that looks like it



would work as intricate machinery. I've collected many parts throughout the years from models I've built and now have recycled them for their components. Friends have given me many parts they no longer require or need.

These greeblie parts aren't just glued at random anywhere on the structure of the ship. I take my time and pick out parts that would work together well with other parts to create functionality. The parts have to look like they would work and do something in the real world. Another key in

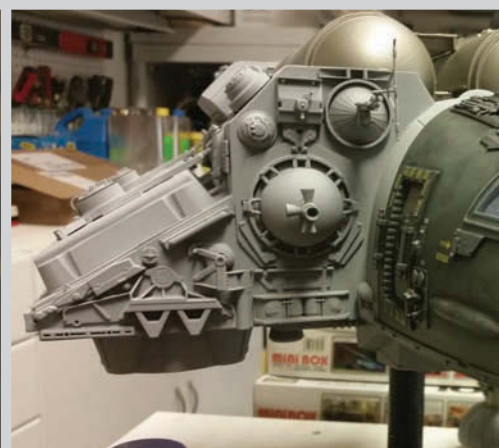
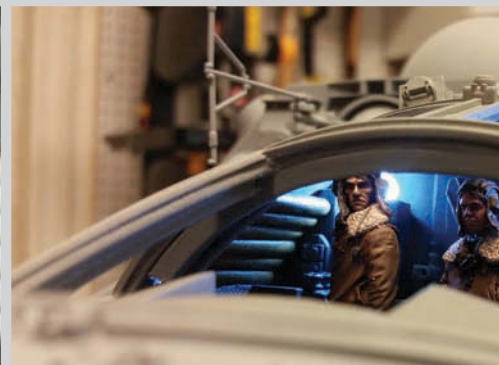
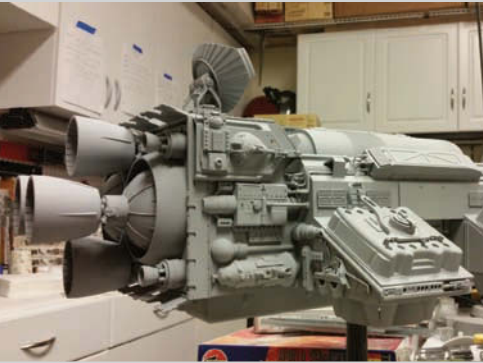
creating realism is to disguise the parts used from their original purpose. If you're going to use an armour tank road wheel, disguise it with other parts or pieces of plastic so that it doesn't look like an armour tank road wheel stuck to a model.

Apart from using model kit parts on my ship, I also use everyday items that you may find around the house, corner market, hardware store or even in your trash bin. I've learned to look at items for their shapes regardless of their original purpose. If you look at the main engine bells on the ship you

may be surprised that what I used were four \$2.00 plastic shower heads I picked up at the hardware store. I gutted them out and placed two of them on acrylic hemispheres from *Plastruct* and the other two were placed directly to the rear engine panel in a staggered format. Another example would be the cockpit. You can see from one of the pictures before primer was added that the cockpit is actually the front end of a *Dustbuster* shop vac. I had one laying around the shop that no longer

worked so I cut it up and used the front end along with the mounting mechanism and attached it to the front of my ship to serve as the cockpit as mentioned.

Other items I used were various packaging blister packs you get when purchasing many items. Some of these were from battery packs and were attached to the underside of the ship. I also used the blister packaging that some ink jet printer cartridges came in, placing these on the four



Opposite page: more added donor parts to the rear quadrant. Windows cut into cockpit. Added details to the exterior of cockpit. Testing lit cockpit interior. Painted interior with added navigator and engineer crew figures. Painted, weathered and decalled cockpit.

Across centre spread: test fitting interior with figures and light. Test fitting painted and fully lit cockpit with crew.

This page: another angle prior to painting, weathering the rest of the ship. Initial scratchbuilt cockpit interior. Another angle of the fully glazed cockpit in place. Main thrusters all painted and weathered. Radar all painted and weathered.



landing structures. The dish to the radar was actually the lid to a disposable food container from a deli that I reshaped and used. I dressed it up with styrene strips and parts from the *Airfix Saturn V lunar lander* and launch escape system tower.

Once I cut the windows to the cockpit it was determined that the scale would be 1/35. I also added an airlock hatch to one side of the cockpit. The interior of the cockpit was a difficult task as it was scratchbuilt and very hard to work in the limited space of the vacuum head. I intended the *Miranda* to have a four-man crew: a pilot, co-pilot, navigator and engineer, and I used various

Top: completed ship, front angle.

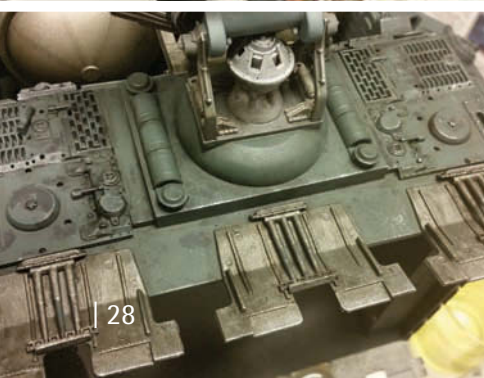
Right: completed ship, upper side view.

Below: main engines lit.

Bottom left: upper rear deck, detailed, painted and weathered.

Centre: initial paint to the bottom section.

Right: painted landing pads ready for weathering.



1/35 scale figures to create the ship's complement. The interior has a pilot and co-pilot station with seating; right behind the pilot's seat is the navigator's station with seating also, and behind the co-pilot is the engineer station. There is also a hatch at the rear bulkhead that connects to the airlock. The cockpit is also lit, this including overhead lighting, floor lights, instrumentation lights and exterior navigation lights. I did these with a self-contained battery operated LED system that sits right in the airlock section when the cockpit is attached.

Getting to the rear engines wasn't quite that difficult. I had designed a large enough space to accommodate lighting with a self-contained battery pack also. The whole engine bell section attaches with four screws, one in each corner, these being covered with four secondary thruster bells that are made to be removed for easy access to the interior battery pack and lighting.

The radar dish was made to be removable so that it doesn't obstruct the removal of the fuel cell tanks. As was mentioned previously the dish was scratchbuilt. I needed to place the dish on a stand so I went into my parts bin and created a stand using various 1/35 scale armour road wheels and bogies along with other model parts and plastic

stock. When completed the radar turned out to be a model all by itself.

Since the ship was designed to land on a surface, I gave it four landing pads with strut support along with vertical thrusters to the underside. I also scratchbuilt two hanger bays on both sides of the ship, these serving as cargo bays for equipment used on a surface.

Painting was achieved using the hairspray technique, whereby the weathering is done in different layers of colour giving it that worn look of chipped, faded and peeling paint. I then finished it off using oil paints to dirty her up as a result of space travel. Decals came from a variety of different sources that I had in my decal library. I was, however, able to name her *Miranda*. After all, she is a lovely and reliable ship and her crew love her.

Hope you do too.

*You can check out Rolando's kits at:
resinatorlab.com
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Jupiter and Beyond the Infinite

Theo P. Stefanski equips the Discovery Command Module for the ultimate trip

AS IF I HADN'T LEARNED MY LESSON THE LAST TIME, BUILDING *ATOMIC CITY*'S *ARIES IB*, I recently boldly went where mere fools fear to tread when *Captain Cardboard* (Scott Alexander) declared that the *Discovery Command Module* was available as a kit. Although this is another 'round' 2001 kit, it is, oddly, not a ship but rather a *part* of one, being the front section of his 11-foot, prebuilt-only *Discovery*. It's rather odd building part of a ship – kind of like only building an *Apollo* capsule (In case you don't remember, that was a space ship used by the Americans. When they had a space programme.) I set off to scenic Hanford, California, in my unfortunately black half British car in 100-degree weather once again to collect several pounds of resin and such. I was shown all of the parts on a table and given a tutorial several hours long regarding its construction and pitfalls to avoid. After lunch and more instruction I set off back with the two boxes of parts.

The kit is more or less 1/35 – 1/32 scale. The main sphere is in two halves, one half sporting a mould seam, which I'd been warned about. The conical collar behind the sphere is spin cast resin created by an outside company, and a bayonet locking ring is provided to gain access to the interior after construction, this consisting of the flight deck and *Pod* bay. As with many films, live action sets don't always fit into the dimensions of the miniatures, and one could see that the centrifuge would never fit into the *Module*'s contours.

In the *Pod* bay are, of course, three *Pods*, two of which were the same, the one *Pod* on the extended platform being different and featuring a recessed area underneath. The *Pods* are very nice in themselves, and very suitable for someone with limited space and time.



Constructing the interior with consoles, Pods and Pod platform.

I built the interiors first, as they presented the most problems. The *Pods* came first, since they are seen full scale in the film and needed to look sharp, especially the one on the platform. The other two are seen through the open door, and only from the back and one side. I built, sanded and painted them fully round anyway. The manipulator arms are well cast and have brass rods inside them. Decals for the *Pod* doors are provided and the main *Pod* would feature LEDs in its headlight holes later on in the process.

The two interiors took up a lot of my time. The flight deck consists of many parts which must be put together in the correct orientation, edge to edge, with certain gaps for the finished unit to fit the hull and take shape. For the light panels I cut slots in the main walls, as well as in the windows on the back door and ceiling by the computer room. The seats were hollowed out to save weight and I also made head rests and other seat

fittings. The consoles in the front of the seats were designed in such a way that just a small amount could be seen through the windows. The black and white colour pattern I applied was based on the finished film and also employed a silver pen for some walkway borders. I made use of printed film covers and glued them in place on all of the various switches and button panels. The various switches on the wall outside the computer room were made from corrugated plastic and the light panels were covered with a translucent plastic. Due to restrictions in space, the interiors are to a slightly forced perspective but work because there is only one view through the window or the port.

The *Pod* bay was more complex. There are three *Pod* platforms but only one of these can extend outwards. Any one of the three *Pods* can be the one that extends, but whichever one is chosen is the only one that can extend. I went

with the standard choice of the centre *Pod*, as the interior works at its best with this configuration. The platforms were hollowed out, once again to lessen weight and to allow the brass rails to support the *Pod* that comes out on it. Round stock is supplied for this but photos from the film show rectangular rails, so I used brass channel stock instead with cross pieces soldered in place. Wires would also run through this channel to a mini phone plug that the *Pod* would plug into to supply power to its lights. The ceiling was completed with all the piping that was absent from the kit. The test

bench did not seem right to me, so I slightly lowered it, and I also remade the screen out of black styrene with cutouts so light would show through the supplied semi-transparencies.

Conspicuous to me was the lack of space suits on racks. I discussed this with the *Captain* and he said he didn't believe the lack of suits would be noticeable. That may be true, with ten more feet of ship to distract the observer with a complete model, but as I am lacking that extra ten feet with this kit I made up two suits using 1/35 Russian

Below:
constructing and
painting the
Discovery
Command Module.



tank crew figures that were in an ‘at attention’ pose. After much *Dremel* work and cutting of plastic tubes, I had my suits. Chest packs and helmets were made from built up styrene, and all were mounted on three brass rods imbedded in the floor. Upon seeing the finished suit, the *Captain* expressed interest, and I whipped up another suit complete with backpack for possible inclusion in subsequent kits. After all that and upon careful observation of that part of the film, I realised I really only needed one suit and two helmets. Apparently, if the astronaut goes out in a *Pod*, he

takes one of the suits and a helmet. Actually, the man on the flight deck takes only a suit but no helmet, trusting nothing will go wrong with the ship’s seals. The unneeded suit was therefore cut up to make a seated figure and given a head to depict *Frank Poole* on the flight deck (Although slightly Germanic looking as the head came from a *Panzer* crew).

The walls were done up in white, black and red where applicable. Extra aircraft decals were cut up and used as the small bits of lettering here and

Below: completed
Pods and interior.



there. The floor strips were completed using black with silver edging. I also built the three raised platforms made of black styrene. The spare parts corridor was replicated by using a printed sheet which is folded and attached behind its door. The room behind the window at the entryway was avoided completely by painting the windows black – even I did not have the patience for that one! Small screws were used to hold the ceiling and back wall together.

It was time to turn my attention back to the sphere. The mould seam on the smaller back half was sanded away and I built up the cone and collar assembly by first drilling a half-inch hole for a threaded support pipe. This pipe threads into a fitting behind the bayonet lock mount. I then attached the large ring collar to the back of the sphere by drilling and tapping holes, so the studs could go through and be secured with eight wing nuts. I thought the other two *Pod* doors could pop out on occasion, but I discovered the edges would not be light tight so I filled them all in with a little detail on the reverse side, just in case. The main windows were trimmed and dividers were built. The two middle windows have visible padding, the other two are thinner and have a curve. The open *Pod* door wall seemed a little thin, so I made it appear double-walled by adding a ring of styrene taken from a *Gemini* capsule kit, which I thought made a good fit. I created two small pieces of door edge, top and bottom. Watching the film throughout this process I found quite helpful. I saw the *Pod* doors fully retract on the set, but these do not or cannot on the model used in the film.

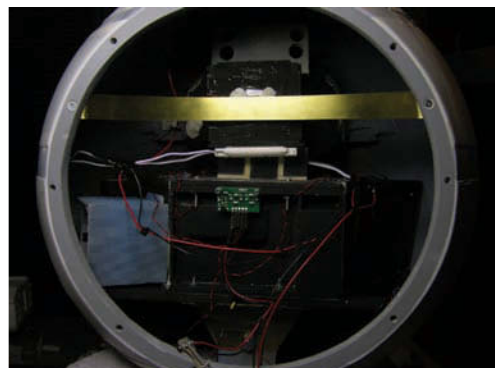
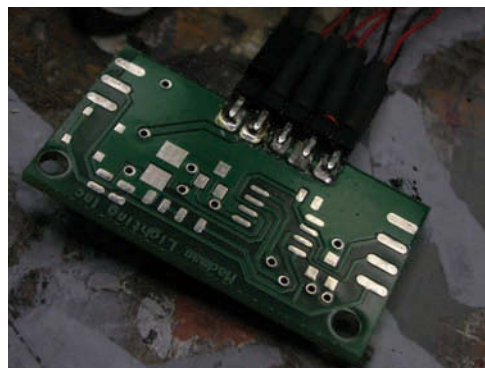
It was finally time to join the sphere halves with superglue and *JB Weld* to fill the gaps and create overall strength. This was followed by intermittent sanding and re-sanding, trying not to obliterate too much detail in the process.

The *Pod* bay is intended to rest on an ABS tube that fits into a recess in the bottom of the sphere. I was in a hurry while trimming it with a power saw and it shattered, so I came up with the adjustable alternative of two L brackets that were joined with a bolt. The hole was a little bigger and allows for more adjustment. One L bracket was trapped at the bottom of the sphere with resin, and the other bracket to the *Pod* bay. The flight deck in turn rests on a resin block at the top of the bay. A curve of brass is used to push the flight deck forward, keeping it in place. A small amount of hot glue was used to stabilise this area, as I didn't expect them to come out anytime soon.

For the lighting in the past the local electronic shop would have sent me off with a diagram and a bag of components, as with my previous *Aries* model, but they no longer exist. Not wanting to get a degree in electronics, I remembered the name *Madman Lighting* from *Sci-fi & fantasy modeller*. John Cook from *Madman* designed a lighting setup which featured flat LEDs for the panels and round ones for the one *Pod*. The circuit board for this setup is attached to the back wall and uses two 9-volt batteries.

The exterior was sprayed in *Tamiya* primer followed by *Testors White*. I then waited and wet

Below: lighting the interior and *Pod*.





sanded away most of the texture, all the while remembering the phrase ‘hand rubbed motor car finish’ from one of the various books about the making of the 2001 film models. I then started masking to apply the grey panels, many in the now discontinued *Testors Camouflage Grey*.

Using the *Captain’s* method, I misted white all over until the desired contrast level was reached. The window area was left in *Primer Grey*. As it looked a little bare, small period-correct decals from the *Gemini* kit were used here and there all over. I settled for ‘caution’ decals instead of the correct ‘warning’ ones for the airlock door, and everything was sealed in semi-gloss clear with final buffing.

This imposing, partially spherical space ship will be wall mounted, and, as such, greatly contribute to the steady decline in my house living space.

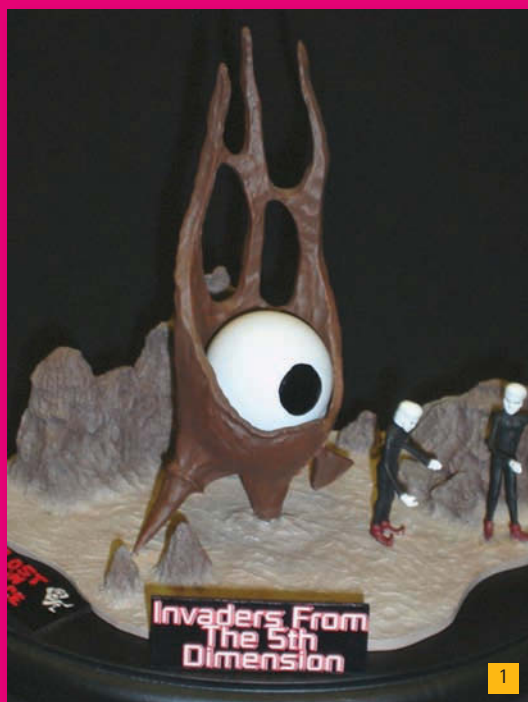
With regards to what my next modelling odyssey would be:

‘...he was not quite sure what to do next,
but he would think of something.’

Arthur C. Clarke.



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THINKING IN FIVE DIMENSIONS

Jason C. Gares builds a classic *Lost In Space* kit

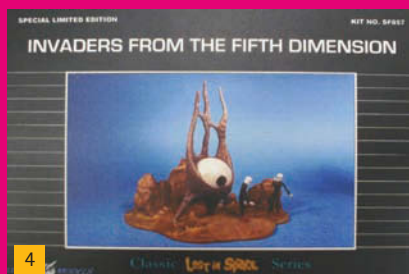
NOVEMBER 3RD, 1965: *INVADERS FROM THE FIFTH DIMENSION* IS THE NINTH EPISODE OF *LOST IN SPACE*. *Dr. Smith* is captured by strange, bodiless aliens that are basically floating heads. They have a worn out computer that needs a humanoid brain to function, but *Smith's* brain is inadequate, so they send him out to find a more suitable brain...

Let's rocket ahead thirty years to the '90s when now-defunct garage kit company *Lunar Models* produced a 1/24th nine-piece resin diorama based on this episode.

(Photos 2-3)



In the day *Lunar Models* was well-known and respected for resin kits ranging from 2001 to the *Outer Limits* plus all manner of spaceships, figures and monster kits. Founded by Mike Evans in the 1980s, Mike eventually wanted to pursue other ventures and sold the business to Randy Jarrett who ran it until 2007. Chris Larson now owns some of the original moulds and produces them under the *Larson Designs/Lunar Models* name. I corresponded with Chris via several emails and he





stated that all he has left of this kit is artwork. There might be a possibility of a re-pop from that artwork, but not from the original moulds as he doesn't have them and the whereabouts

of moulds and masters are unknown. We shall see what the future holds, but until then let's travel back a few years to see how I put this gem of garage kit history together.

Early 2000s: I own my own model kit build-up commission business. I'm contacted by an avid LIS collector. He's commissioned a friend of mine to build the *LM Jupiter 2* and wants the *Invaders* diorama to be done around the same time so he can make a larger diorama encompassing both models. I take on the challenge knowing I have to work within the timeframe of the other builder.

As kits go (even resin ones) it's as simple as they come. The box art shows the two 'floating heads' with full bodies and even wearing red, elf-like shoes. I suppose a kit depicting floating heads would be a little boring, so bodies had to be made. Behind them is their unusual spacecraft and the rocky base all three get attached to. Inside were eight pieces: ship, two bodies with heads, legs and feet together as one, left arms, right arms, a black rubber ball that fits inside the ship and the detailed rocky base. The figures stood around two inches tall, the ship around seven inches; the ball was around two inches and the base measured around nine inches long by seven wide, with rock formations reaching three and a half inches in height. The piece that impressed me most was the base as the formations and sand were very well realised. The spacecraft was also detailed, but seemed 'soft' in areas, and the figures lacked detail, their arms being in strange positions, which I'll talk about later. (Photos 4-5.)

With all parts accounted for and in good shape, it was time to give them a bath as they had a slick of mould release agent on them. If I hadn't washed them there was a probability primer or paint wouldn't adhere to them. In some cases I've found if resin (and plastic) parts aren't thoroughly cleaned before applying primer and paint the effects can be quite devastating to the final look of the model. Primer and/or paint can peel or bubble and sometimes those effects may not happen right away, but further along on the build. I'll say it again – no matter how clean parts look, *clean them anyway*. Depending on the mould release, several washes with extremely hot water and dish soap are



the first way to go. If that doesn't work you may have to resort to a harsher chemical, like mineral spirits. In very few cases even these may not work, so you may have to buy even harsher chemicals to get the job done. Before deciding, contact the kit producer to see what mould release they used and their suggestion for cleaning it off. If you can't contact them, look on the Internet and see what other builders have done who have gone through the same thing. I finished up cleaning the parts and letting air dry overnight. If you don't want to wait use a lint-free towel so particulates don't get all over the parts. The last thing you need after washing are things you can't see until your primer and paint have dried – I've been through it and it's not fun stripping, re-washing and re-painting. The next day I double checked to make sure I'd eliminated all mould release. You'll know when it's gone as release residue won't be felt on your fingers and pieces will be dry to the touch. (Photos 6-7.)

I studied how the parts had been cast. If flash from the casting process was on anything, I needed to get rid of it – otherwise it would show up in the final piece, which is unacceptable. The kit was well cast, but there were still some areas needing flash removal, so I took out my motor tool and got to work. I looked over the base first, as it's large,

making it easier to see any flash. Areas around the rock formations needed sanding down, and because the flash was in areas that had a lot of detail I had to be extra careful. I used a pointed grinding tip to get into hard to reach areas that most likely would tear up traditional sandpaper. Not only was there a lot of detail to consider, but the terrain around the formations was pretty rough in texture, so a strong sanding tool was needed. With all flash eliminated I went around the outer shape of the base to smooth it out, discovering small areas on the edge that had split during casting and needed to be repaired. I mixed five-minute, two-part epoxy and, using a toothpick, stuffed as much as I could into the splintered areas and squeezed together, ensuring any extra epoxy would be squeezed out, hopefully creating a stronger bond between both layers. Once set, I used my motor tool with the same tip and ground away where the glue leaked out. I had to take care I didn't sand or grind away too much epoxy and had to give it enough texture so it would blend into the surrounding area. Once done, I changed my bit so I could smooth the outer edge more easily, giving a more contoured look. With rough areas smoothed out and blended in with their surroundings, I went in with several

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different grits of wet and dry so any marks left behind from the motor tool were completely eliminated. (Photos 8-11.)

Putting the base aside I moved on to the spacecraft. Its unusual shape makes it unique... more organic and less mechanical, setting it apart from anything else in LIS. The body is mostly hollow so the sphere can fit inside, with three 'horns' connected in the centre of each and three 'legs', all of which needed careful handling as they could get damaged or broken easily. The ship was cast as one piece, but with two mould halves, leaving a seam line directly in the centre, from top horn to bottom centre leg. Even though I considered the body pretty strong, both horns and legs needed holding with care as I didn't want to make more work for myself by breaking them. I really had to be careful during the sanding process, so when using my motor tool with the pointed tip I had it at a slower speed than used on the base and avoided holding onto the horns or legs. I cupped the ship in my hand and carefully ground away the seam. Both sides and inside of the body were easy to grind down, but horns and legs were

another story. For the horns I turned up the speed slightly, as to not create a 'wobble' which could make the motor tool bounce on delicate areas while grinding and break them. When grinding or sanding the horns by hand I made sure I didn't apply too much pressure. At times I could see them bend ever so slightly, so I backed off. The same went for the legs. I had to back off and ever so lightly touch these areas, making the process more challenging. Sanding these parts lightly meant it would take twice as long to eliminate the seams. Other challenging areas were between each horn and the very tip of the 'thorn' or spiked landing gear. These areas had a certain amount of detail around seam lines that could easily be sanded away if not careful. Light wet sanding had to be done with the highest grits possible to avoid sanding down any detail. Once done I put it aside and began work on the two figures. (Photo 12.)

These are interesting to say the least – a 'mixed bag' of small, delicate parts with little detail. I appreciate they need to be in scale with the ship and surroundings, and are based on characters that really weren't anything to speak of in the



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show, but more time and effort could have been taken to give them more detail, as this is 'soft' and should have been worked on a little more. Lack of detail would come back into play once I started painting them. As with base and ship, I started by eliminating flash. Unfortunately, as stated before, the figures were small and delicate, making flash removal challenging. I could only do this by holding one figure at a time carefully as not to snap both legs. Once I had a good enough grip, I used a tapered bit and ground areas of flash away without applying too much pressure. I went vertically around the body from head to toe but not between the legs, as this would be done later. The delicate, matchstick-like arms received the same treatment as the body. With all flash removed I used jeweller's files to get in between the legs and into areas where the motor tool couldn't. Holding figures in one hand and file in the other, I worked around neck and boot sections until seam lines couldn't be detected and carved into each area a little more so more detail could be seen. Seams gone, I attached arms to bodies. Both sets were bent in weird angles and looked unnatural.

You could cut and reposition these, but I wanted to leave them, as (1) I didn't want to damage them, (2) I was afraid there might not be enough surface material to bond them together and (3) the unnatural bending made them look more 'alien'. Before gluing the arms on I needed to see how they would look, so used a little white *Elmer's* glue and attached them to the shoulder areas. It looked like, after gluing, I would need to do some careful shaping of the shoulders. I added a little *Zap-A-Gap* superglue to each shoulder area, attached the arms and sprayed 'kicker' on to accelerate the glue. Once hard, I looked for any gaps, filling these with the same glue, spraying on more kicker and letting sit overnight. Next day I used the pointed tip in my motor tool and ground away any excess glue, sanding down and sculpting the area better so the seam was smooth. I then took a jeweller's file and sanded away under the armpits to smooth them out and make them more defined. Lastly, I wet sanded the same areas so they were as smooth as possible. The figures were now assembled and ready to paint. (Photos 13-26.)

Before painting I repeated the step of washing all



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parts. ...AGAIN? Yes! Since I did a lot of work on all parts and handled them more than once, it was a good idea to wash them a second time. Depending how you like to work, you could skip the first wash. I washed the parts initially because there was so much mould release on them. I didn't want to get it on hands, tools and other things I might touch during the deflashing and construction phases. It's up to you how you go about the washing process, but if there's a lot of mould release I suggest you wash the parts at the start for the reasons just mentioned. It might seem a lot of unnecessary work but you'll thank yourself later. It's better to err on the side of caution than do too little and have laziness come back to bite you later down the road, ruining your fun and the finished model. I let the washed parts air dry overnight, the next day being entirely dedicated to priming.

I decided to airbrush the primer, as there were lots of detailed areas I felt couldn't be reached with a spray can. I mixed *Model Master Gray Primer* with *MM Universal Thinner* and used a *Badger Crescendo 175* double action airbrush to spray a couple of test shots on model parts in my studio. I like to test the consistency of all paints before applying. If the mixture's too thick it will cause the paint to spatter; if too thin it won't cover evenly

and could run or streak, leaving patterns that show up in later, coloured top coats. I applied three thin coats of *MM Primer* over the base, ship, aliens and rubber ball and let sit overnight. The next day I looked over all parts to make sure it had adhered properly, then sprayed three thin coats of protective sealer over the parts, using *MM Dullcote* spray lacquer. You can use any brand of sealer – just test it out on a scrap piece with the primer already on so you know how it will react before applying to the actual model. Again, I let sit overnight and prepared for colour undercoating. (Photos 26-30.)

I wanted the undercoat to be black so colours applied on top would have a dark look to them. Using the *Badger* I applied three light coats of *MM Flat Black* (reduced with *MM Thinner*) and let sit overnight. Once dry, I sprayed three light coats of *MM Dullcote* over the undercoat to seal and protect it, checking how the paint was laying down over the parts, making sure there was no bubbling or cracking. I must have washed the parts well as I could see no 'lifting' on anything. I let sit overnight and prepped for airbrushing on colour. (Photos 31-36.)

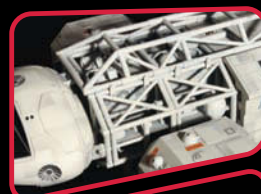
When painting any kit I list what I want to paint and the colours I want to paint it in. Depending on the complexity of the kit, it's a good idea to use the

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instructions as a starting point, or make a rough diagram with what you want painted and the colour associated with those parts or sections. This way you can figure out if you need the same colour for more than one section, saving time and labour. It also helps if you want to layer paints, add wash, stain or drybrush effects and know where you want to do those things. I mixed some *Createx* reducer (to prevent tip dry) with *Ceramcoat Burnt Umber* and airbrushed it all over the ship and rock formations. I also changed the *Badger* for the *Iwata Revolution CR* to achieve a more detailed look in tighter places. At this point all I'm doing is 'colour blocking', giving the parts I'm airbrushing a flat, undetailed look. Don't worry about not seeing every detail – all that will be covered later, after blocking is completed. (Photos 37-40.)

Since it's the biggest focal point of the diorama, I decided to continue airbrushing the base and finish it off entirely. I also made this decision because no other parts needed to be 'colour blocked' with *Burnt Umber*. I sprayed any remaining paint out, cleaned both the paint cup and inside the body using *Createx Airbrush Cleaner* and, once sure both cup and body were clean and free of previous paint, went ahead with the next colour. Next up was to colour block the sand using the *Iwata* with *Ceramcoat AC Flesh* thinned down with *Createx Reducer*, applying just enough to let some of the black basecoat show through (also known as 'pre-shading', usually employed between parting lines of panels on aircraft, tank and spacecraft models to add dimension to those areas, bring them out more and give a gritty look). Using this technique with the sand base accomplished the same thing, adding more depth. Around the base of the formations I sprayed light, wispy coats of the same paint to give the illusion sand had been blown around. I let it dry, cleaned my airbrush and moved on to the last colour. To add dimension, depth and an overall sandy, barren look I lightly airbrushed *Ceramcoat Ivory*. Passes on base and rocks gave the impression wind was constantly blowing sand around and catching in the grooves of the formations. I also added uneven 'swirls' to change

up the overall colour scheme and get rid of any 'hot spots' where too much of one colour was centralised in one place. It looked good where it was at, so time to stop and not overdo the blown sand effect, as I didn't want to drown out any of the other colours. (Photos 41-43.)

With a big part of the diorama done, I moved on to other parts of the build. Next up was the ball that sits inside the main part of the ship representing the cockpit. Unfortunately the black rubber ball was too large to fit into the space provided in the body. This could be due to the original mould shrinking over time from use, or none-use – it depends on a lot of factors. I had to figure out how to deal with this issue. I measured the diameter of the ball and went to local craft and hobby stores to see what I could find. I looked everywhere and was unsuccessful. I then visited a woodworking store, and found a round, wood ball that was slightly smaller than the black one and fit perfectly. Back at my shop I sprayed on many coats of *Krylon Gloss Sealer* to get rid of wood grain and texture, as I needed the ball to be smooth. Between coats I wet sanded to speed up the smoothing process. Also, the several coats of sealer soaked in, not allowing the colour coats to do the same. When satisfied with the finish, I applied several light coats of *Krylon Gloss White*, wet sanding between coats to keep the ball smooth and even all over. I finished off with several light coats of *MM Flat Lacquer* to seal it all in. I cut a small circle on airbrush *Frisket* paper, placed it on the ball and airbrushed a black circle. This gave the appearance the ship had a window or, perhaps, an eye. The ball was done, but I wasn't ready to insert it quite yet, as I had other work to do. (Photos 44-45.)

While at the woodworking store I picked up an oval base slightly larger than the diorama. I didn't want the diorama to have the base it came with as I wanted a museum quality look. I treated the wood plaque the same way I did the ball, sealed it with *Krylon Gloss Sealer*, wet sanded between coats, sprayed *Krylon Gloss Black*, wet sanded between coats and sprayed several light coats of *MM Semi-Gloss Lacquer* to seal. I mixed 2-part epoxy and spread it over the underside of the base,



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55

then laid it on the top of the wood base and placed heavy books on top so it would stay in place for the 5 minute set-up time. Once the epoxy was hard, keeping the base in place, I drilled holes through the bottom of the wood base directly into the rock formations, but not all the way through. I cut long sections of wire coat hanger, mixed more epoxy and spread it in the drilled holes and around the hanger sections. I inserted the sections into the holes and let set up. Once the epoxy was hard, I mixed more and dabbed it into the holes where the epoxy sunk down, spreading it flat with a card to make it flat with the rest of the wood base. When set, I sanded it even with the bottom of the wood base, then covered the bottom with black felt so it wouldn't scratch any surface it was placed on and to hide the holes and epoxy. (Photos 46-47.)

Attaching the ship to the diorama base was next. I found where the centre of the ship on the base was and drilled a hole through the resin into the wood base, but not all the way through. I drilled a hole through the centre 'landing gear' from the inside, cut more hanger, spread epoxy over it, inserted it through the hole and let set. Once the rod was in place, I made sure the length was right to insert into the hole I drilled into the base. Once to my liking, I mixed and added epoxy to the exposed coat hanger and in the hole I'd drilled in the base. I inserted the ship with wire into the hole and held it until the epoxy set enough so I could let go. With the ship permanently attached to the base I could glue in the white ball 'cockpit'. I spread epoxy all over the bottom inside of the ship and placed it inside, completing this section. (Photos 48-50.)

Last to tackle were the two 'headless' aliens with bodies. Boy does that sound funny! It was very basic small figure painting: hands and heads were *Ceramcoat White*; body, arms and legs stayed flat black and the 'elf-like' shoes *MM British Crimson*. I painted the eyes *Ceramcoat Black* and went back in with a dab of white. I attached them to the base using epoxy, completing the diorama. (Photo 51.)

To finish I made two nameplates, one on the side with the name of the show and one in front for the specific episode. Both were easily designed by finding artwork on the Internet, editing them in a

graphics program, printing them out to the size I wanted on photo paper and spraying with fixative so the ink wouldn't run or smear. I glued both to thin, black *Foamcore* then permanently glued them to the black base, completing the museum look I wanted to achieve. (Photos 52-53.)

...A fast, fun build with few parts and seams which were easy to work on and eliminate – except for the delicate figures, of course. If you're an LIS fan and come across this kit pick it up, as I don't know how many are left in circulation. Also, if you're new to building and painting resin kits, this would be a good one to try, as there aren't many parts to deal with. Just be sure to handle figures and arms with extreme care, or the *Invaders From the 5th Dimension* may come after your brain next!

Thank you for reading and your support. MODEL ON!



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ATTACK OF THE SPIDER

Part 2



Diego Cuenca

*creates a layered narrative around his
Sci-fi Soviet Walker*

A base for a spider

THE DIORAMA EVOLVED AS A BASE ON WHICH TO LOCATE THE WALKER WITHOUT MUCH HASSLE. Its centrepiece would at first only be *the Spider*, but ultimately I think the child framed by the huge machine adds a touch of humanity.

I wanted the house not to be so tall as to downscale *the Spider*, but on the other hand not so small that it could hardly be seen. Per Olav's diorama of a house with a dog stealing sausages from a child provided the solution: a two-storey building. On the level at which *the Spider* stands it presents only one floor, while facing the viewer are *two* levels, the idea being that the house was already abandoned when *the Spider* arrived. For this reason, except in the area just destroyed by *the Spider*, snow and dirt have already entered the property. The transition from lower to higher levels is made by the staircase, which gives access to both the house

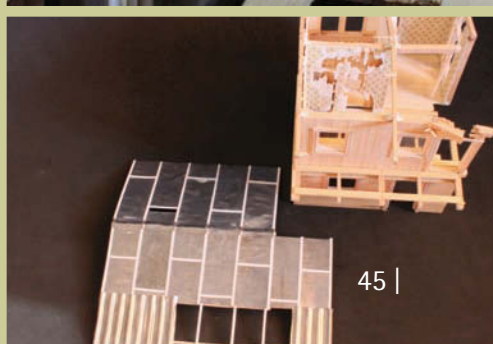
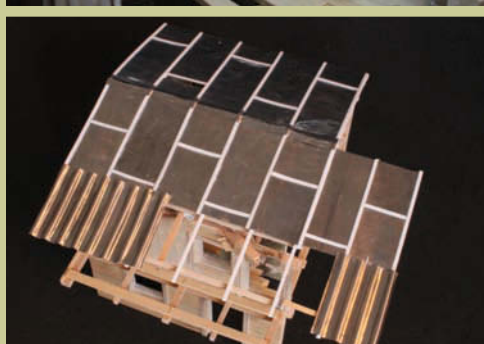
and central area of the diorama. I also included two areas of higher ground (forest) on both sides of the diorama to frame *the Spider* and focus on it.

The house filled the left area of the diorama, while the right side needed some element to balance it, resulting in the *Sturm*, the vehicle being sited in the remains of the collapsed retaining stone wall.

An excuse for the child in the centre was created by placing a small sleigh in front of the house and adding footprints of children from the east to its final position.

House Construction

The house is built with both an inside and an outside, leaving an air space between the walls stuffed with straw and mud, as seen in photos of Soviet wooden houses. I built it complete then



damaged the walls 'on site'.

The structure of pillars and beams is made of pine for strength. The inner lining is made with model ship decking and the exterior from pine. The small beams forming the walls are balsa. In areas of damaged wall stuffing straw and mud can be seen. To avoid an all-wood look I designed the main wall with bricks, and a concrete wall on the lower floor.

To create both the brick and the concrete walls I filled them with plaster casts of the appropriate shapes, then carved the bricks. The cast of the concrete wall is lined with model ship decking alternately arranged to mimic panelling.

The lined interior consists of several layers, broken in places to create interest. The interior walls were first lined with model ship strakes, onto

Paint sequence

Exterior walls

Base: *Ammo* acrylic *Light Grey-Blue*.

Wash: *Ammo* Brown wash for *German Dark Yellow*.

Light sanding.

Red + Dark Brown acrylics applied with spatula.

Sand and cutter on the paint.

Dark Brown Wash (excess removed with rag), *Ammo Dark Brown* wash for green vehicles.

Dry pigments:

AK Interactive European Earth.

AK Interactive Dark Earth.

In low areas

AK Interactive Slimy Grime Dark.

AK Interactive Streaking Grime.

Brown and Green oils.



which I applied putty with a spatula then stuck wallpaper over the putty.

To create the roof exterior and interior I superglued the main beams onto the wooden structure of the house and built the outside of the roof over them using white glue to attach the wood. When the roof was complete I removed it (cyanoacrylate joints on wood are not very strong) and built the inside with model ship strakes. Thus, in areas of broken roof, you can view the two elements of its construction.

The stairs and balcony cantilever are made from the same materials as the house; the studs are railing spindles and the handrail is balsa.

Moss texture applied with shredded florist sponge, fixed with glue and water.

Reapplied *Slimy Grime Dark*, *Streaking Grime* and *Brown* and *Green* oils on moss texture.

Unpainted wood, ladder, interior wood

Base: *Ammo* Light Grey-Blue acrylic.

Wash: *Ammo* Brown Wash for *German Dark Yellow*.

Light sanding.

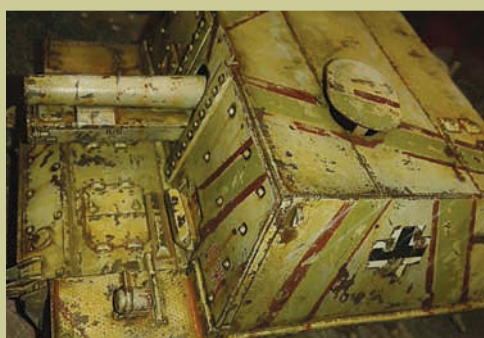
Ammo Dark Brown wash for green vehicles (excess removed with rag).

Dry pigments:

AK Interactive European Earth.

AK Interactive Dark Earth.

Punctual washes with *AK Interactive Slimy Grime Dark* and *Streaking Grime*.







Windows

Base: *Ammo* acrylic *Light Grey-Blue* + *White*.
Sand and score paint.
Diluted *Dark Brown* oil.
Glass created from transparent plastic.

Brick walls

Base: *Dark Red Brown* acrylic.
Various shades to bricks with acrylics.
Varnish layer as protection.
Washed *Dark Brown*.
Mapping with oils.
For brick joints: plaster + water + white tail.
General wash with diluted *Brown* oil.
Random washes with *dark Brown* oil.
Areas with mould:
AK Interactive Slimy Grime Dark.
AK Interactive Streaking Grime.
AK Interactive Earth Effects.

Fixed pigments and dry pigments:

AK Interactive European Earth.

AK Interactive Dark Earth.

Straw walls

Base: acrylic *Dark Flesh* + *Medium Yellow*.
Ammo Dark Brown wash for green vehicles.

Fixed pigments and dry pigments:

AK Interactive European Earth.

AK Interactive Dark Earth.

Roof

Base: Airbrushed acrylic *Light Grey*.
Highlights and shadows: *Dark* and *Light Grey*.
Roof interior area: *Dark Grey*.
Chipping with sponge and acrylics.
Washes with *Black* and *Brown* oils.
Fixed pigments and dry pigments:
AK Interactive European Earth.
AK Interactive Dark Earth.



Moss applied in same way as for stone wall.

Iron beams

Base: Chipping acrylic.

Rust variations with a sponge and different rust tones.

Washes with Dark Brown oils.

Pigments with Light and Dark Rust applied with fixer.

AK Interactive Dry pigments *European Earth*.

Dry pigments *Earth* to integrate with diorama.

Sturminfanteriegeschütz

Construction

Dragon kit was made from the box with the exception of the rear box, which was replaced by one made from tin foil to appear dented and smashed by the leg of *the Spider*.

Paint sequence

Rust base:

Base: *Ammo Chipping*.

Lights: *Ammo Chipping* + *Ammo Oil Ochre* + *Tamiya XF-7 Matt Red*.

Shadows: Previous colours + *Ammo Black*.

Sponge-applied Red Brown + Black + Red + Yellow.

Matt Varnish.

Camouflage:

Chipping product.

Base primary colour: *Ammo Oil Ochre*.

Lights: *Ammo Oil Ochre* + *White*.

Shadows and low areas: *Ammo Oil Ochre* + *Red Brown* + *Yellow Grey* + *Black*.

Brush with water to remove paint.

With the next two colours I again applied the lacquer technique. Secondary colour is *Ammo Light Green Khaki* and tertiary colour is *Ammo Chipping* + *Tamiya Matt Red*.

Gloss Varnish.

Decals.

Gloss Varnish.

Effects:

Mapping with oils.

General wash with Dark Brown oil.

Diluted black wash oil to outline.

Punctual washes with Brown tones.

Rust Streaking Grime and horizontal rusty areas.

Grease Streaking Grime, pigments with fixer and wet pigments.

Terrain

Construction

The base terrain was created with *Das Pronto* putty (over a structure of extruded polystyrene) attached with white glue. For the top grooves I

made putty cylinders secured with white glue and with a putty knife extended the putty to obtain the desired shape. All the land was modelled in this way. The rock on the right is a piece of charcoal used in barbecues, treated with diluted white glue.

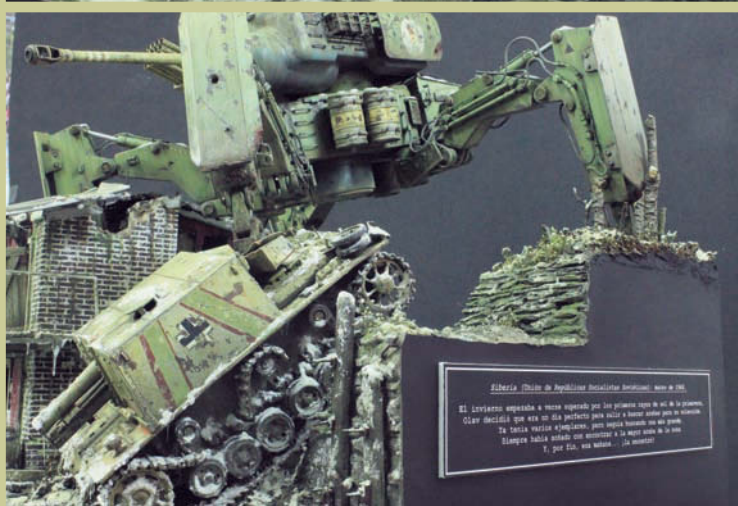
The walls are made with natural stones glued against the polystyrene, with plaster then glued into the holes to form the final wall. I included some sprigs of thyme and rosemary as branches that have managed to poke through the walls.

To the bottom wall I added two elements to help break the monotony of so many stones: a brick area and two wooden posts anchored to the wall with metal bolts. As this wall has partially collapsed under the weight of the *Sturm*, I first positioned it complete then removed the demolished area and let it fall on the ground. Only by doing this would there be the correct number of stones present.

Before painting I applied a mixer of beach sand, potting soil, plaster, white glue, water, pigments, some grass and 'sea foam', and tapped an old brush over the surface to create the proper texture. In the middle of the road, where there are no ruts I applied more 'sea foam'.

For the forest areas I tried something new. As a surface base I took natural moss in different colours and textures, removed most of the soil from the roots and let dry for a few days. NB: *some species of moss and lichen are protected and cannot be removed*. I then applied white glue with water several times to fix everything (moss is very fragile when dry). With the consolidated pieces I began forming two forest areas, making sure textures were consistent between the pieces. Areas that seemed a little hollow were filled first with putty and then with the previously described mixture, creating a forest base on which to work. Next came the painting





process and placement of mud, snow and vegetation.

Additional vegetation was either natural (small herbs and flowers) or artificial (*MiniNatur*), and was easily placed with tweezers and white glue. The mud alternates in the lower areas (a mixture of pigments, plaster and potting soil) with *Humbrol Gloss Varnish* to create a sense of moisture.

Finally to the ground I applied alternately snow (baking soda + water + white glue), water (transparent resin from *Woodland Scenics*) and highlights (over the snow and water) with *Humbrol Gloss Varnish*. Once dry, I weathered the snow with brown oils, especially in low areas and near puddles. These three elements were combined to merge into one another naturally.

The trees are poplar and pine twigs, some cut with a saw to mimic saw-cut trees and others broken by the passage of *the Spider*. The trees were modestly painted with a few washes of black and brown oils and some drybrushing. You can see some poplar twigs with embedded yellow lichens that are much more realistic than anything I could create.

Icicles are transparent plastic stretched and

glued with cyanoacrylate. Then, to obtain a translucence, I applied transparent resin *Realistic Water* from *Woodland Scenics* with some acrylic white. Once dry I applied icicle snow mixture around the base, next applying the same transparent resin to this snow mixture.

Paint sequence

Stone wall

Base: modulated colours (medium grey, dark grey in low areas and light grey in elevated areas).

Washes with Brown and Black oils.

Mapping with oils, dark colours in low areas and lighter colours in elevated areas.

Light dry brush with Light Grey.

Moss:

Texture: florist's sponge, crumpled and glued with white glue.

Paint: *AK Slimy Grime Dark* and *Streaking Grime*.

Terrain

Base: Airbrushed acrylic dark green + chipping + black (*Ammo*).

Shadows: Airbrushed acrylics, previous mixture with more *Ammo Chipping* and *Black*.

Lights: Airbrushed *Ammo* acrylic *Light Green* +

Ochre.

General wash with *Dark Brown* applied with airbrush (*Earth* wash from *Mig Productions*).

Washes in sunken areas with airbrush (*Ammo Dark Brown* wash for German vehicles).

Mud

Mixture: white glue + water + pigments (*European Earth* + *Dark Earth* from AK) + plaster + 'sea foam' + potting soil + ground herbs.

In sunken areas with mud I applied AK *Interactive Earth Effects* and *Streaking Grime*.

Wet mud

Mixture: plaster + pigments (*European Earth* + *Dark Earth*) + AK *Interactive Fresh Mud* + white spirit + potting soil.

I applied this over some areas and as splashes on the upper wall from passing vehicles.

Water

Woodland Scenics Transparent Resin tinted with AK *Earth Effects* and *Slimy Grime Dark*.

Snow

Mixture: bicarbonate + white glue + water.

Over the snow I applied *Vallejo Gloss Varnish* as a fixative.

Weathering snow with diluted dark brown oils.

Over the snow, water and some mud areas I

applied *Humbrol Gloss Varnish*.

Auxiliary elements and figures

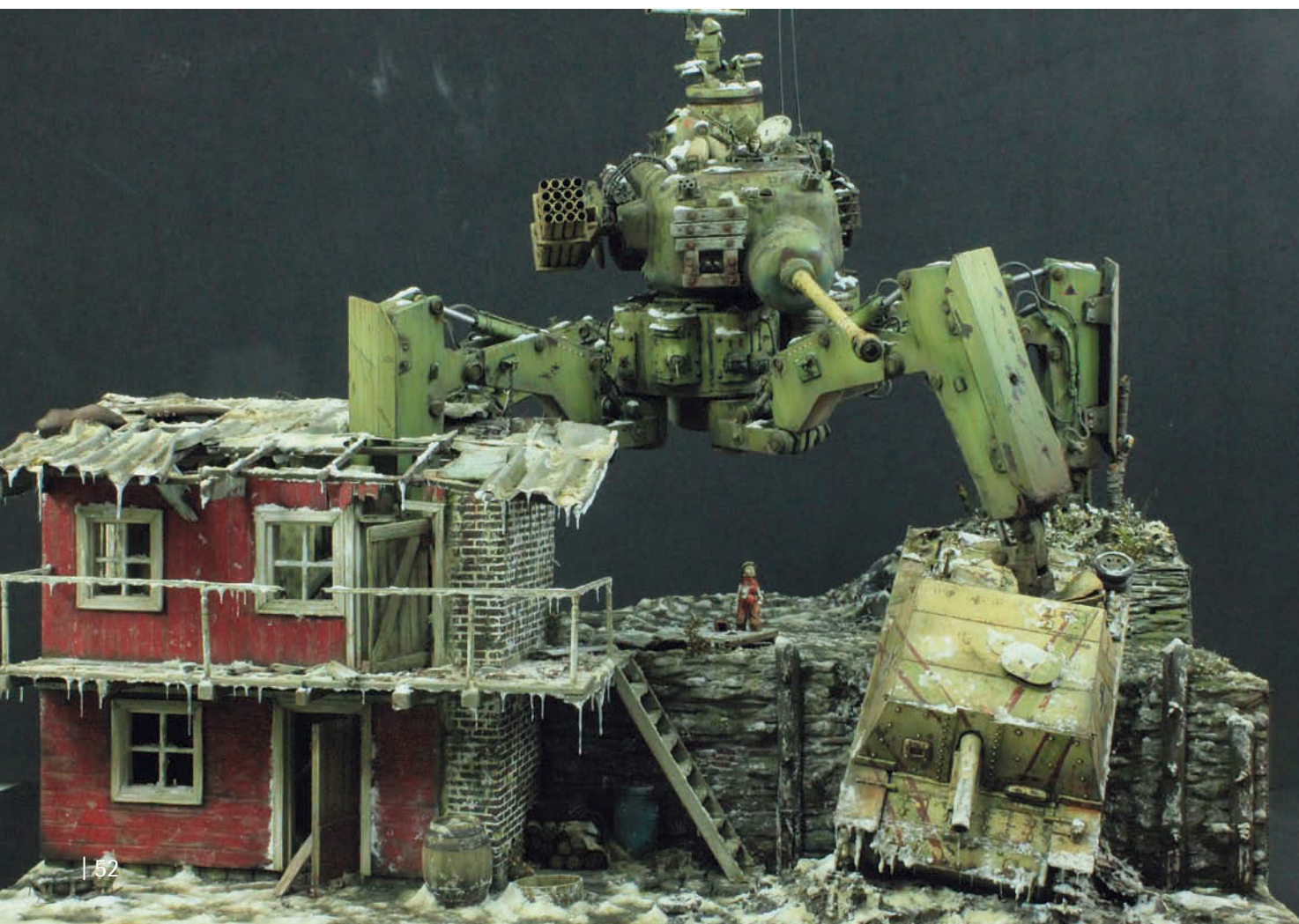
These are tools, ladder, barrels, blankets, bed and other household utensils, the small sled and the two figures (*Spider* driver and child). The child figure is from *Andrea*, with a slight change to create long trousers. The driver's head is from *Hornet* over a body by *Miniart*. The sled is scratchbuilt from wood, plastic, copper wire, cotton wire plus *Citadel* putty to simulate animal skin for the seat. The bed is also scratchbuilt of plastic and putty. I painted the wooden barrel as painted in the book *Realistic Wood Effects* of AK: Base (airbrush): *Ammo Oil Ochre* + *Chipping*.

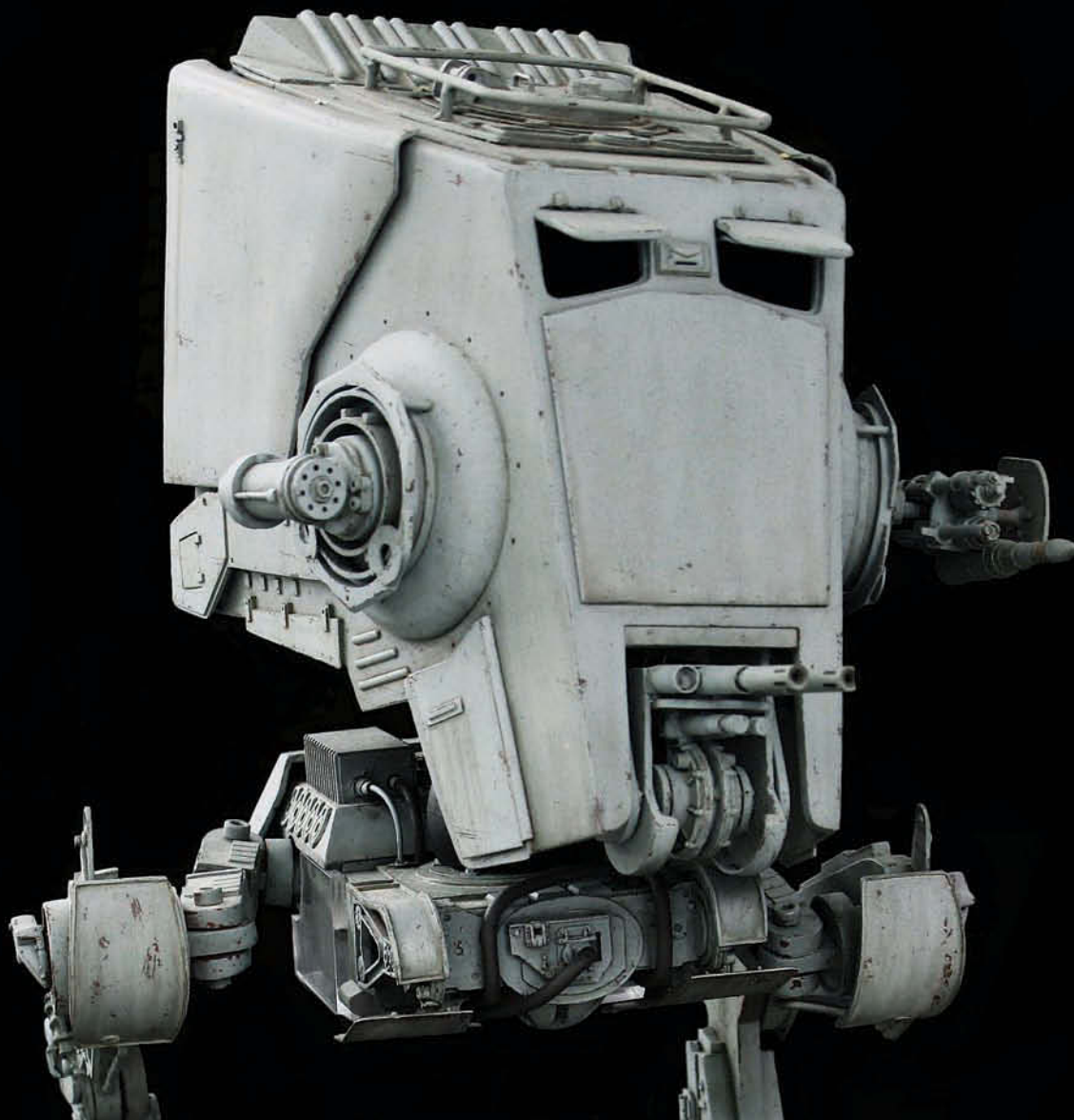
Shadows (airbrushed): Previous mixture + more *Chipping* + more Black.

Lights (airbrushed): Previous mixture + more *Oil Ochre* + White.

Acrylic Lines: White, Yellow Grey, Oil Ochre, Light Green Khaki, Green Khaki, Chipping, Black. Dark colours in low areas and light colours in elevated areas.

Wash: *Ammo Brown Wash* for German Dark Yellow.





Well Worn Walker

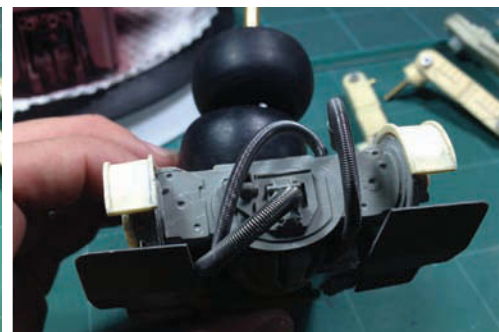
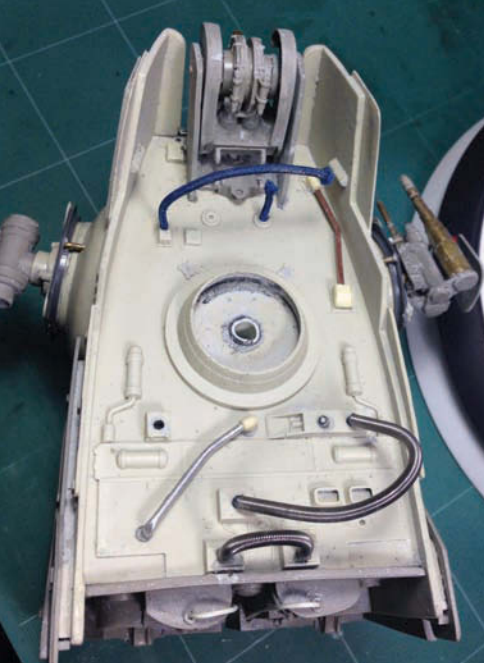
Roberto Aguilera applies a super-realistic weathering finish to a studio scale AT-ST



THE AT-ST HAS LONG BEEN ONE OF MY FAVOURITE STAR WARS VEHICLES. I love the possibilities for painting and weathering this piece of hardware presents, although in the movie the *Walkers* are too far away from camera to make out specific paint details. The fact that no decent kit of the AT-ST has been made available until recently makes this an even more desirable subject to add to my collection... I scratchbuilt an example back in 1993 to 1/35 scale and loved it, but I'd always wanted to own a decent-sized, accurate 'Chicken Walker', and that opportunity finally

came in late 2013, when I found this beauty on eBay...

The pictures accompanying the description showed the model standing in a weird, low-slung pose, as though it 'was shooting at the ground or aiming at an *Ewok*', as John John Jesse described it to me. The model appeared to be correctly detailed, however, and seemed to be to studio scale. I later learned that it was a finished example of a resin kit by the famous Steve Neisen of *Nice-N Models Designs* – a release which dated a *long* way back.



Build

The first thing I needed to do was clean all the surfaces, as when it arrived the model was covered in a thick primer over which had been applied an equally thick paint finish. Stripping it wouldn't be easy, and I wondered how many pieces might be lost via the application of thinner.

Changing the pose was very challenging too, as K&S rods had been glued across the legs, and some pieces would need to be cut to avoid damaging the kit.

Stripping was carried out via repeated applications of the aforementioned thinner, with primer and paint eventually surrendering to the process. As anticipated, damage was done to some parts during the process, with replacements needing to be scratchbuilt and some *Tamiya* kits needing to be bought: both 20mm flak versions from the '70s were used as a source for kit-bashed parts. Finally, long-time bud and fellow modeller Rafael Romo created castings to replace parts that had had to be cut off while repositioning the legs. Apart from this work, the model basically came assembled.

The fun part – painting

I wanted to begin the paint process by trying something I'd never done before. I love the challenges of painting a *Star Wars* model – duplicating the correct colours is very tricky, and they are hard to define too, what with film lighting, compositing and image degradation all having an effect on the perceived colours of the studio miniatures. Books are a great reference source, although images can also present incorrect colours due to effects of the printing process and

variables in the developing of the photographs.

You have to be really sure what you are aiming for and study your references well. *AT-STs* have, for the most part, been left out of the main sci-fi modelling world, with the inadequate *MPC* release from the '80s doing little to help make this model a popular subject among genre modellers, and with no subsequent releases being made available until the 2015 kit from *Bandai*. Even though it's a popular model in the *Star Wars* universe, the *AT-ST* has far from been explored with regard to its incredible painting and weathering potential.

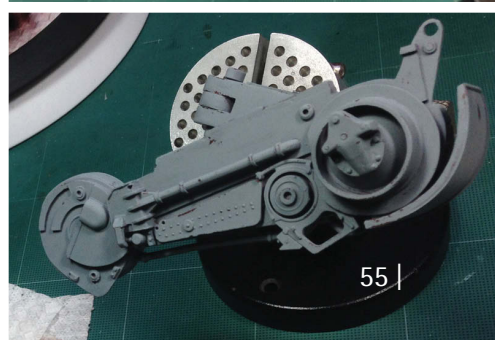
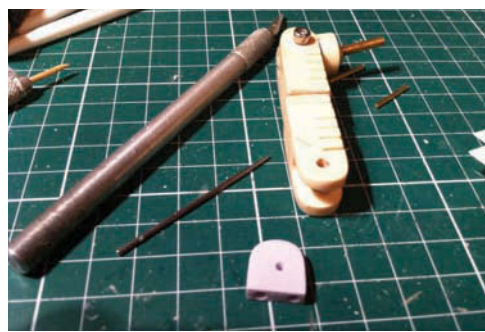
When I paint a *Star Wars* model I like to finish it in a realistic way. My military modelling background has made me familiar with the use of paints, washes, pigments, etc, so I basically treat *SW* subjects in exactly the same way as I would pieces of military hardware.

Because I wanted to be able to see chipped and scored paint the first thing I needed was to have the *AT-ST* primed in a specific way, a way in which none of the original filming miniatures had been primed or painted. I usually pick an enamel paint for this stage, as a strong base for the subsequent chipping and weathering process, but I also wanted to try a *Vallejo Primer*. I wanted that 'old red primer look' used for steel, so I chose *Vallejo Surface Primer German Red Brown RAL 8012*. Several coats were applied and I allowed them to dry for a week. Shading is important as you create 'older rust' at this stage, covering the red primer with some darker brown in fine lines and in tiny areas all over the model via subtle use of an airbrush at low pressure. Subsequent chipping will then look awesome as it will feature variations in the rust colours. A mix of *Tamiya Red Brown* and

Above:

deconstructing the *Walker* – the entire model required stripping before the new paint finish could be applied.

Opposite: the legs were repositioned for a more realistic pose and replacement parts were added. Sub-assemblies were then primed in *Vallejo Surface Primer German Red Brown RAL 8012* to produce that 'old red treated steel look'.





a little *Tamiya Flat Black* served to shade the Walker in areas where I wanted the chipping to look older or more intense, such as the hatch, roof, and feet, with the model then being allowed to rest for some days.

Next it was time for the real thing – the base colour. When watching the movie defining this is very tricky, but two main reference pictures helped me – one in the *Art of Star Wars* book and the other of the actual actors' prop outside the bunker

Chipping, priming and mud splatters add a sense of depth to the 1:24 scale Walker.



in the *Chronicles* book. Both showed me a pale grey overall colour, but with a bluish tinge and some magenta influence.

I eventually placed this as an *Imperial Navy Armoured Ambush Grey II*, used for light ground assault and scout transports. I knew the chipping on this large scale model was going to be

extensive, needing a thin, soft acrylic paint, and so I chose from the incredible *Life Color* range. Three colours were used for the base mix: *Life Color Light Compass Grey UA 026*, *German Lichtblau UA 234* and *Matt Light Grey LC 18*. The mix came out beautifully, with the *Compass Grey* adding a touch of reflecting colour.

Now this is a big model – around 1/24 scale – and I therefore wanted to add lots of detail to make it look massive, so a great many scratches, chips, and tiny

rusted dots had to be patiently and carefully added over a two week period, with me dividing the model into three ‘zones’ so I could be precise. I also got lucky with some subtle changes in colour variation between the body, head and legs as a result of how the resin reacted after priming – life has some nice surprises! Hair spray was applied to each section as I finished the chipping process. Once two coats had been applied, the base colour *Navy Grey II* mix was carefully airbrushed on, working in thin layers to achieve perfect coverage in the desired areas via the thinnest paint cover possible – just a very light layer of the base colour.

I usually start chipping right away after allowing the paint to dry for thirty minutes – I like it dry but still soft – so the process began at this stage and went on for two weeks. I usually hand brush with a Drybrush 4 and gently wet the area. Then I use a toothpick, a pointy piece of styrene and a chipping eraser. Many different shapes and sizes of chipped paint had to be created on the *Walker* in many areas, exposing the rust underneath the paint, especially on the hatch and roof, which I thought would look nice worn and heavily rusted. Once each section – head, body and legs – had





been completed, it was left to dry for a couple of days to harden the *Life Color* acrylic.

With a thin 5/00 brush I then used the base *Navy Grey II* to correct the scratches very carefully into the desired shapes – a lengthy process but one that really pays off. A sponge was used to accentuate chipped areas on the hatch, rail and feet, and also overall using *Life Color Dark Rust*.

A very artistic and beautiful part of the shading process is the application of subtle colour variation to detailing and certain parts. I took the *Navy Grey II* and mixed it with *Life Color Italian White* plus plenty of water to create an acrylic wash, almost like milk in consistency. I then used a thin brush and painted thin strikes and washed complete panels or pieces to add depth. Next I repeated the process with a dark mix of *Navy Grey II* and *Life Color Field Grey*, which has some green on it, to wash and darken specific creases and pieces. After all the acrylic washes had been applied I highlighted some nuts and bolts with a mix of *Navy Grey II* and *Life Color Italian White*.

When this stage was thoroughly dry I applied a coat of a mix of *Vallejo Acrylic Satin/Gloss Varnish* all over to even the surface and also give the paint a metal-look finish.

Washes and oils

I can't stress too highly the importance of choosing the right wash as well as the right amount of wash, as the effect of a wash can vary greatly via the many ways you can apply it. I have been attempting lately to apply oil washes with the airbrush, very subtly, working from less to more with even coats as opposed to strikes with a brush, which looks quite effective. However, for an overall wash that affects all the paint you need what I like to call *filters*. A *filter* is applied to affect the entire base colour – in this case I required a green drab/brown oil mix with a dull finish to soften the magenta *Navy Grey II*. I wanted a certain green moss touch to the final look, more of a hint than an effect in itself... with paint you can make people 'feel' things without really seeing them.

I therefore went with two filter passes, one for the green/brown tone: *AK Interactive DAK*



Vehicles Enamel Wash, and the second *AK Interactive Brown Blue Enamel Wash*.

You need to let these dry well for at least two days between applications of each filter. A third filter, *MIG Neutral Wash*, was applied by hand brush to sections of the legs, the roof and to parts of the body.

Each pass changes the dynamics of the colour completely, so subtle is the best way to go. The chipping looks awesome under those enamels... let's let it dry for a bit.

Oils are a great way of creating effects such as rust streaks, and a great means of enhancing creases. Carefully with a brush I now added those rust streaks using *Winsor & Newton Burnt Sienna*, *Abt 501 Dark Rust Oil*, again applied deeper around the hatch and feet to enhance the old and new rust effects.

Then it was back in with the airbrush for shadows... Masking the shields on the sides and some areas on the head I airbrushed shadowing (a very subtle grey/brown acrylic mix) to their edges to make these areas look worn down.

Everything was sealed off with a very soft and subtle dull varnish pass, not covering the model

entirely, so that, by happy accident, some parts 'shone' more than others. Hey... fly casual...

Pigments

I finished the project by adding the 'ground work', applying four kinds of mud – fresh, dry, and semi-dry, courtesy of *MIG* and *Vallejo* pigments, carefully splatter-brushed to achieve a realistic mud look as though the *Walker* had been crossing rivers and stuff on *Endor*. The leaves and branches are from *Joe Fix* 1/35th scale diorama accessories plus 1/35th maple and oak leaves. Pigments were applied very thinly and in small amounts on other parts of the vehicle to represent dust and dirt.

I really like the end result on this kit – the closer you get the more detail you can see, and the colour looks a great match to the one in the movie, giving the impression that this is a real movie prop.

...A great kit by Steve Neisen at *Nice N Models*. – Thanks, Steve, and thanks, too, to my friends Rafael Romo, Gerardo Cortes and Alberto Barba, who helped me in this task once again, and also to Dani Perez Ares for the *Photoshop* composition.

I IMAGINE RIGHT ABOUT NOW YOU ARE THINKING: *Dollhouse? Are you kidding me? There are no dollhouses in Sci-fi & fantasy modeller!*

Fear not, Dear Reader, this is not about the kind of dollhouse your little sister used to play with. What this article is about, is building the Y-615 'Dollhouse' tank from the *Maschinen Krieger* (or *MaK*) universe, as conceived by Kow Yokoyama. According to *MaK* lore, this tank fights on the *Independent Mercenary Army* side against the *Strahl Democratic Republic*, and is manned by a three-person crew.

This 1:76 scale resin kit was offered by *Bomvol und Zionel* some years ago, as a limited-edition, licensed garage kit. I bought it, put it away, and promptly forgot about it, until I happened to notice it recently when I was giving my modelling bench a much needed cleaning.

The kit includes the *Dollhouse* and a *Raptor* armored suit (1). You have the choice of rocket launchers or railguns for the *Dollhouse's* main armament. The casting is very good, with just a few pinholes to be filled. There are no building instructions whatsoever, but the part count is low

and the model is simple enough to make them unnecessary.

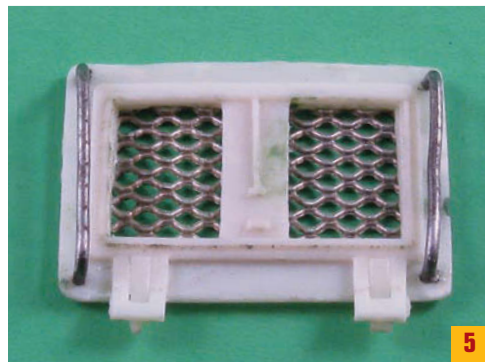
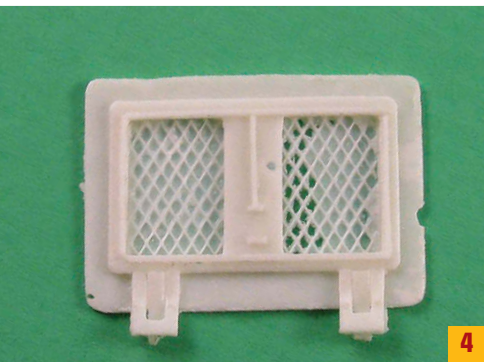
I started construction with the tracks. They are cast as full length pieces, with a rather bulky resin block in the back, which I carefully ground away with my *Dremel* tool (2). The resulting track was flexible enough to wrap around the wheels moulded in the drivetrain (3).

The engine hatch has a very delicate mesh moulded in, but unfortunately there is also a thin web of resin blocking the holes. I'm sure with careful painting and highlighting the hatch can be made to look reasonably well. However, I wanted to be able to see the engine detail under the hatch, so I started down the path of carefully drilling out the 'empty' spaces in the mesh to enable a see through effect (4). After almost going blind and getting less than ideal results, I decided to cut my losses and simply replace the resin mesh with a piece cut out of an aluminium coffee filter. The end result looks a bit out of scale, but it does allow peeking into the engine compartment, not to mention letting me keep whatever is left of my sanity. I also added a couple of grab bars made with wire (5).

SO YOU WANT TO BUILD A DOLLHOUSE...

Alfonso Pereira creates an evocative scene from the MaK universe





Moving on to the main hull, I replaced the moulded-in guns with aluminium tubing to enhance their appearance (6). The resin mudflaps included with the kit were a bit too thick for my taste, so I replaced them with thin *plasticard*, and added a small metal rod to work as a locating tab for the turret (7).

At this point it was time to decide what to do about the main armament. Pretty much every single model of the *Dollhouse* I've ever seen had

the twin rocket launcher pods. I wanted mine to be a bit different, so I went with the railguns instead, enhancing the attachment points to the turret with *plasticard* spacers and metal locator tabs. The railguns had only one power cable connector moulded, but there should be two of those, so I added a second one with a small punched-out disc of *plasticard*, and drilled a hole in the middle to accept the cables that would be added a later time (8).



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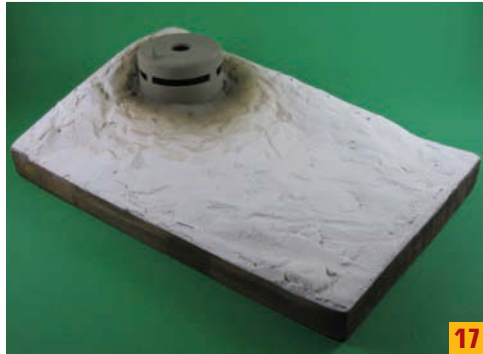
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The *Raptor* armored fighting suit, while tiny, is made up from nine separate pieces: the legs, the torso, two hip armour plates, two shoulder armour plates, an armoured engine cover and the two arms. I drilled the arms and their corresponding location in the torso to insert a short piece of wire that would add strength to the joint (9). The *Raptor*'s primary function in the *MaK* universe is that of a scout, and the figure is moulded in a kneeling position, as if inspecting the ground (10). I had not really thought about how I

would display the models, but at this point an idea started to form in my head: what if the *Raptor* and *Dollhouse* were a scouting unit doing recon on an area where there had been a bit of fighting a few days ago? I could place the *Raptor* on top of a burnt out bunker, looking down an access hatch, while the *Dollhouse* provided cover. With this scenario in mind, I started looking around for anything that could conceivably be made to look like a 1:76 scale bunker. The cap of a can of paint looked like it might work, and a stick-on puppet's



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eye could make an acceptable hatch. I set these items next to the *Raptor* figure to check for scale compliance and thought they could be made to work (11). I then proceeded to cut three slits in the cap, which would represent the viewports of the bunker. A circular hole was cut on top for the hatch, and an antenna was cobbled together with some bits and pieces from a fountain pen and glued to the roof of the bunker to add some visual interest (12). The puppet's eye got dressed up with a few metal and plastic bits to resemble the mechanism to operate the hatch (13), and all the pieces got a coat of primer in preparation for painting (14).

With most of the building out of the way, I shifted my attention to the making of a diorama base, and used some scrap wood to make a very

rough approximation of a hillside so I could mock up the composition (15). Once happy with it, I used metal mesh and plaster to shape the terrain with the bunker already in place and painted it light grey to look like concrete (16, 17). I painted the plaster light brown with ochre and burnt sienna washes to simulate dirt and picked up a few salient points with dark grey to give the appearance of rocks (18). Later on I added static grass to the non-rocky areas of the base.

Then I turned my attention to the painting of the models. Since both the *Raptor* and the *Dollhouse* are part of the same scouting unit, they should have similar camouflage patterns. I sprayed a base of olive green (19), and added hand painted yellow-green shapes with dark green outlines to complete the camouflage scheme (20). The engine



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bay components were painted with metallic grey, with a few bits here and there picked out with red for contrast, same as I did with the tips of the railguns before assembling them together with the turret and mating it with the body of the tank (21). The *Raptor* suit also got red highlights on the shoulder armour pads and gun tip, and black joint covers on the knees and elbows (22).

I sprayed a coat of *Future* floor polish to seal the paint scheme and to provide a smooth surface for the decals. The kit did not include any, so I rummaged through my spares to find a few suitable markings (23). Next I added the power hoses going to the railguns from the main body of the turret, and between the body and legs of the *Raptor* suit (24, 25), gave everything a thin wash of dark grey to highlight small details and dirty things up a bit, added a few rusty spots here and there with a fine paintbrush and sealed it all in with a coat of clear flat acrylic (26). To tone down the contrast and tie the paint job and markings together, I gave the models a filter of oil paints by dabbing a few dots of assorted colours all over (27) and brushing them downwards with a paintbrush soaked in turpentine. The end result is a subtle streaking

that resembles dirt and grime washed down by rain and constant use (28).

The last step was to add the hatch and a few rust and smoke stains to the bunker using pastel chalks, to give the impression that this facility had been knocked out at some point before the arrival of the scout unit (29).

The suit and the tank were then placed on top of the bunker and the field respectively and with that I declared the diorama finished (30, 31, 32, 33). This kit was easy and fun to work on, and allowed me to use different building and finishing techniques while working with varied materials to achieve the final results I was hoping for. As a fan of *Maschinen Krieger* I'm happy to finally be able to add it to my display case.



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WITH THE RECENT RELEASE OF EPISODE VII: THE FORCE AWAKENS, interest in *Star Wars* is at an all time high and new kits are arriving from companies such as *Bandai* and *Revell*. Of all the ships and vehicles in the franchise, *Han Solo's Millennium Falcon* is arguably the most popular and has been kitted several times before by *Revell*, *MPC* and, most notably, *FineMolds*, who produced the most intricately detailed examples to date in both 1/72 and 1/144.

Fans have been craving a large scale replica for many years and for a long time it seemed that the only option would be expensive high grade collectables such as the *Master Replicas* examples.

Step forward *DeAgostini*, a publisher specialising in part-work magazines who, in recent years, have begun to develop a range of modelling titles featuring diverse subjects such as plank-on-frame wooden ships and multi-material large scale

car kits like the *James Bond Aston Martin DB5* to 1/8 scale.

When *DeAgostini* launched their *Build the Millennium Falcon* part work in December 2014 I was initially sceptical about both the quality and the price... £900 over two years? Who in their right mind would pay that?

Despite my misgivings, I picked up the first couple of issues as they were offered at a reduced price and was pleasantly surprised at the quality of the parts provided. Sure, the pre-painted aspect was a little too toy-like for my tastes, but I could see the potential to rework some of the parts to produce an impressive replica of the 32" filming miniature on which this model is based.

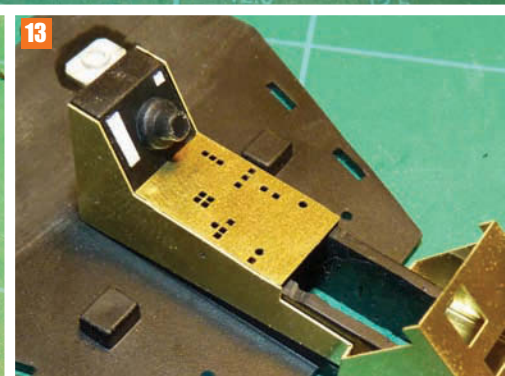
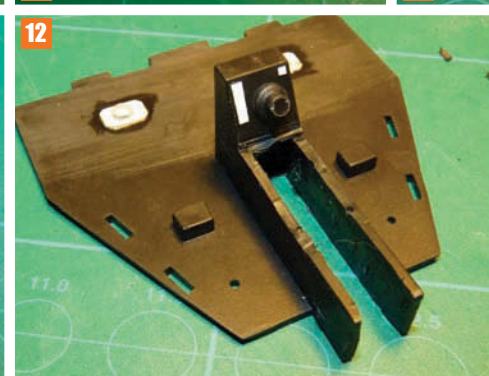
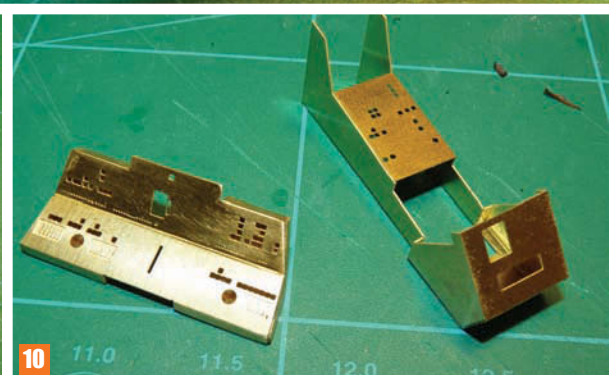
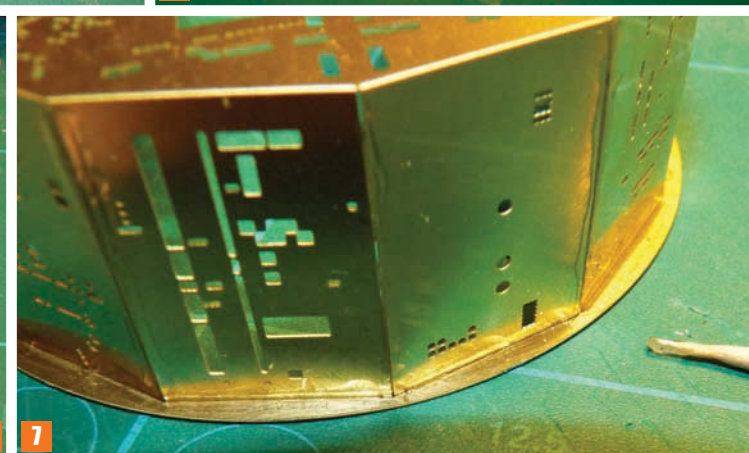
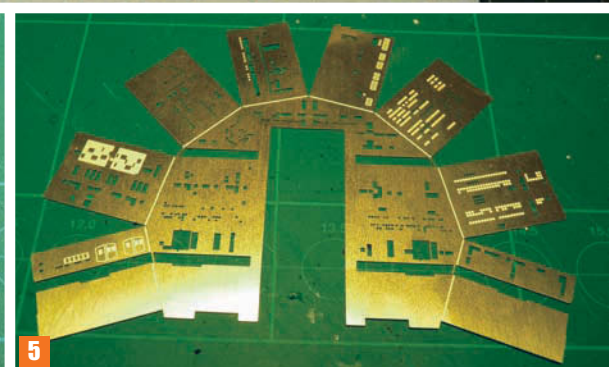
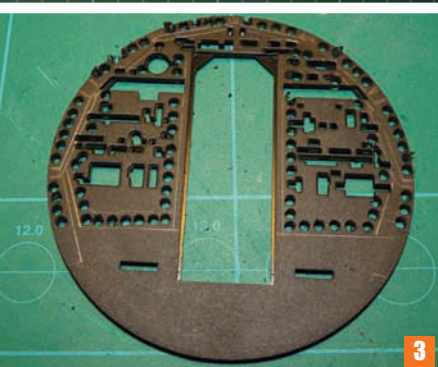
I duly placed an order with my local bookstore and started collecting the 100 issues over two years.

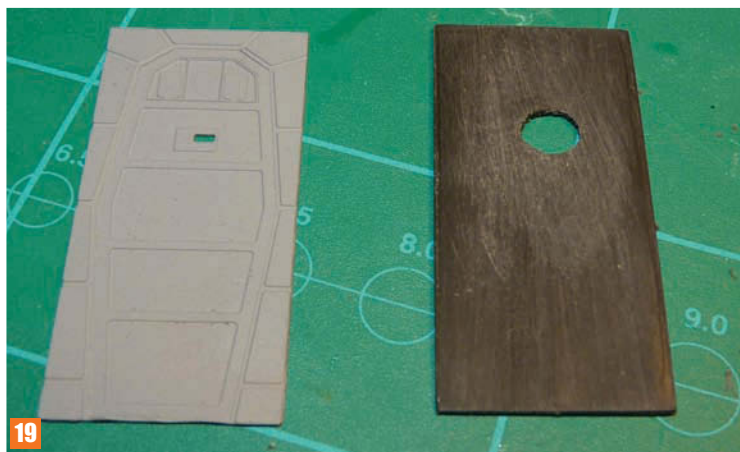
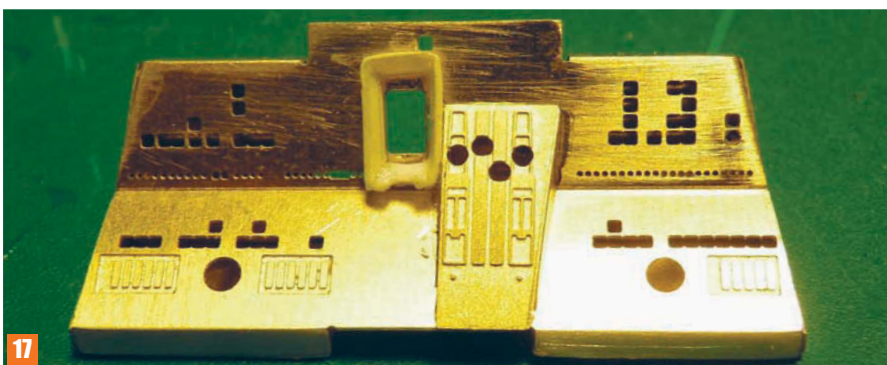
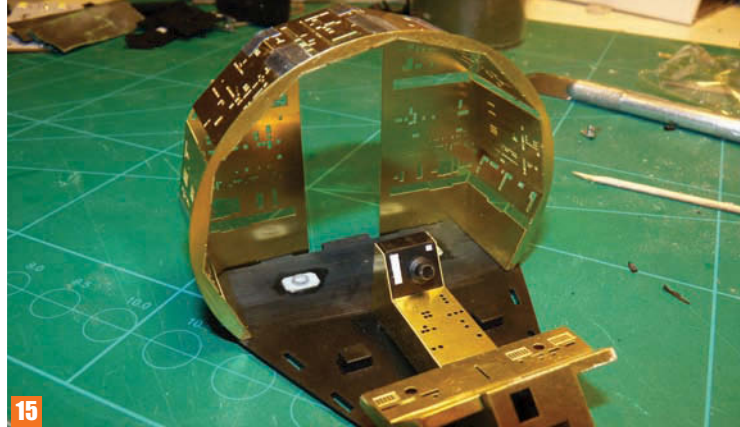
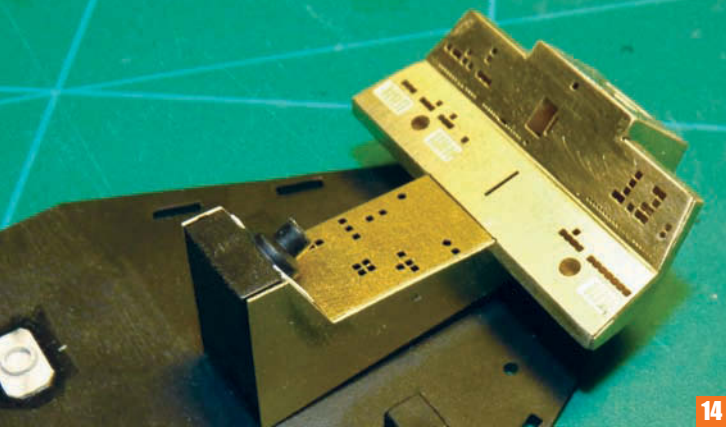
As the various pieces began to arrive, starting

'I've made a lot of special modifications myself'



Iain Costall installs and reviews the
ParaGrafix upgrade sets for the
DeAgostini Millennium Falcon





with the cockpit and cargo hold, I could see the potential for upgrading these elements. I gathered up some additional copies and sent them over to the USA to Paul Bodensiek of *ParaGrafix* who had already started collecting the early issues but was a couple of months behind the UK editions.

His first upgrade set is designed to fit out the cockpit area. *DeAgostini* provide a reasonably detailed cockpit which includes instrument consoles, seats, control levers and a backlit rear bulkhead. Instrument detail is in the form of printed vinyl stickers. This all looks OK at a glance and is an improvement on the crude detail that featured on the filming miniature, but it doesn't match the full size set which figures prominently in the movies.

The *ParaGrafix* cockpit supplies a new rear bulkhead and incorporates the ceiling and wall

instrument panels that simply fold into place. The centre console and front instrument panel are also replaced by brass versions. The through-holes in the brass allow for all the instruments to be backlit (1).

Screen accurate decals printed by *JT Graphics* are provided and some tiny etched headsets add the final touch (2).

Also included is the long etched grill that features prominently on the exterior of the cockpit tube.

Work on the cockpit begins with the plastic bulkhead, much of which has to be removed to allow the brass part to be backlit (3, 4). The brass bulkhead assembly was carefully removed from the fret and the attachment points cleaned up using a fine diamond file and some abrasive paper (5).

The panels were then folded up to form the walls and ceiling and CA glue sparingly applied to the

rear face of the joints to tack them in position (6). Once everything was in place and squared up, more CA glue was applied to the back of the joints taking care not to block any of the light holes (7). Small strips of aluminium tape were used to bridge the joints to give additional strength (8).

The centre and front console were cut out and assembled in much the same way (9, 10).

The kit floor was modified by removing much of the centre console. I also added some bases for the rear seats (11, 12) and the brass centre console was then fixed in place (13). I next test-fitted the front console and bulkhead assembly but did not glue them at this stage (14, 15, 16).

The small monitor hood was assembled and fitted to the front control panel. This was supplied in styrene on my prototype set but is a brass part on production kits (17, 18).

The etched door was primed then attached to a similarly sized piece of styrene with a hole cut in it to allow lighting (19).

The kit's cockpit tube requires some modifications detailed in the *ParaGrafix* instructions. I also found it useful to remove most of the internal locating pins (20), and the inside faces were then lined with aluminium tape to prevent light leaks (21).

At this stage all the various cockpit components were primed then painted with a variety of greys.

Microscale Kristal Kleer was applied to the rear of all the lighting holes except for the rectangular 'striplight' areas (22), with pieces of very thin styrene sheet being used on the back faces of these (23, 24).

The decals are of excellent quality. However, they are very thin and require careful handling. I recommend the following method...

1. Using a cocktail stick, apply a thin coat of *Microsol Kristal Kleer* glazing solution to the REAR FACE of the etched panels. This fills the holes with a film that turns clear when dry. I've heard of people using PVA glue for this but the



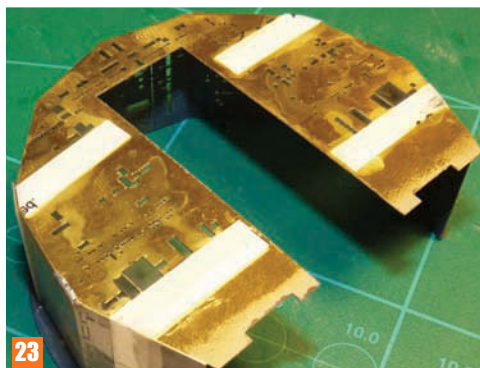
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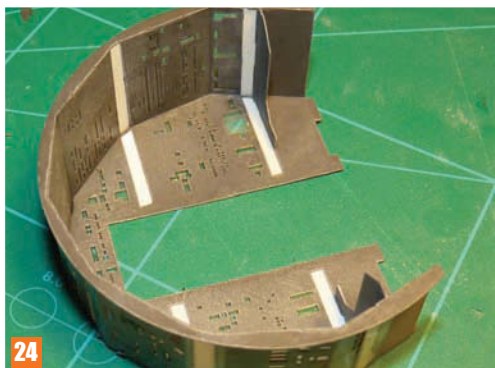
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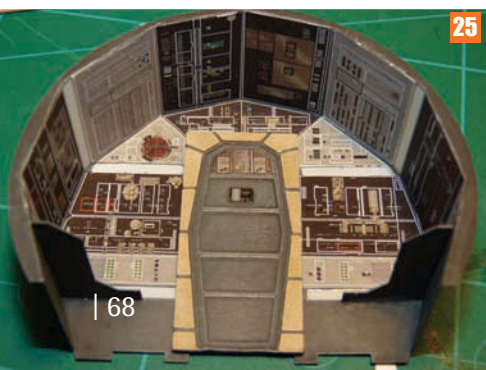
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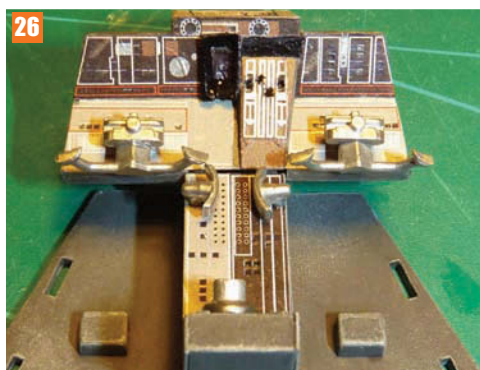
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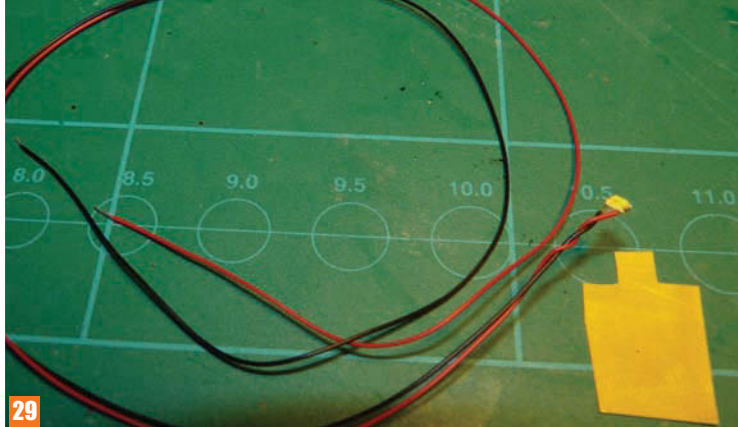
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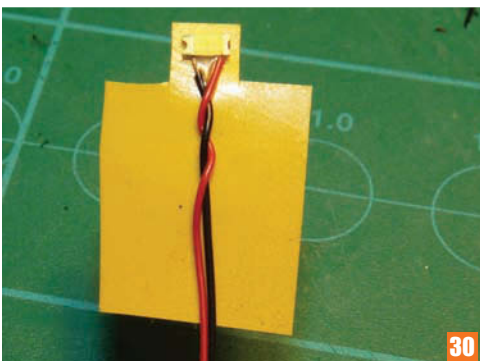
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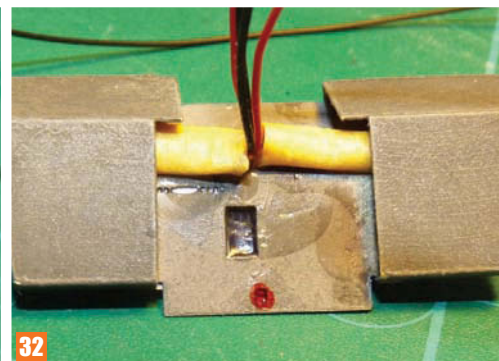
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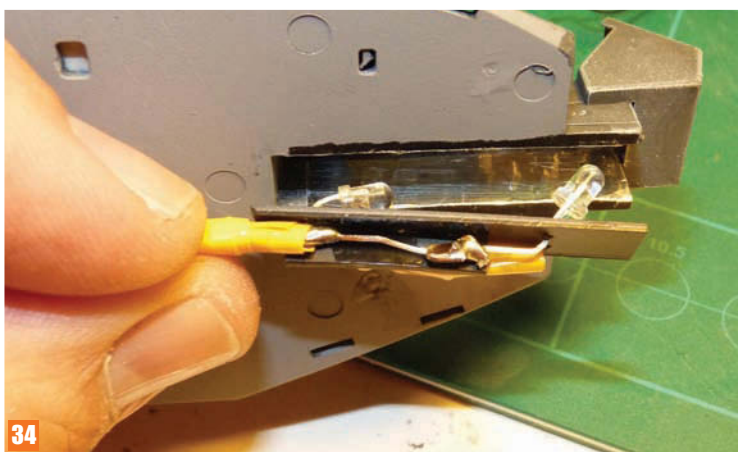
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Kristal Kleer is preferable if you have it....

2. Once the *Kristal Kleer* is dry (transparent) paint a thin coat of acrylic gloss clear varnish to the FACE SIDE of the pre-painted panels to be decalced... I used *Tamiya Clear* and brush painted it on ...allow to dry.

3. Cut each decal from the sheet as close as possible to the edge of the design. Do this one at a time so as not to mix them up. I actually cut the multiple panels into individual ones to avoid having to apply them round corners...

4. Holding the decal in a pair of flat tweezers (I use plastic ones) momentarily dip the decal into lukewarm water and lift straight out again. ...DO NOT LEAVE THE DECAL FLOATING IN THE WATER.

5. After 15 to 20 seconds the decal will slide off the backing paper ...apply the bulkhead decals first

followed by the overhead panels, ensuring that the edges meet.

6. As you apply the decals you can add a drop of water or *Micro Set* decal solution to the panel prior to sliding the decal on. DO NOT TOUCH THE DECAL WITH YOUR FINGER. Use a damp paintbrush to coax the decal into position.

7. Allow each decal to dry for ten minutes or so before applying the next. Don't rush the job!

Follow this and you should be OK ...some people like to seal the decals – personally I think they are OK left as long as you don't handle them once applied (25, 26, 27).

To simulate the various coloured lights in the cabin, *Tamiya* clear colours were applied to the rear face of the panels (28).

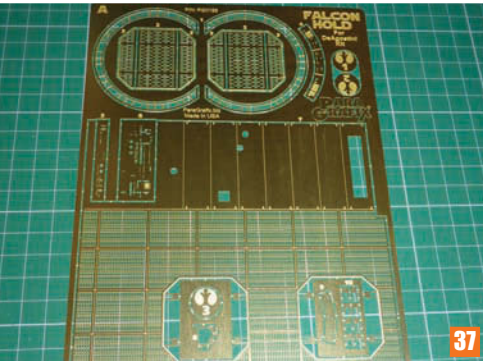
DeAgostini provide a lighting module for the rear bulkhead, but nothing, however, for the front



35



36



37



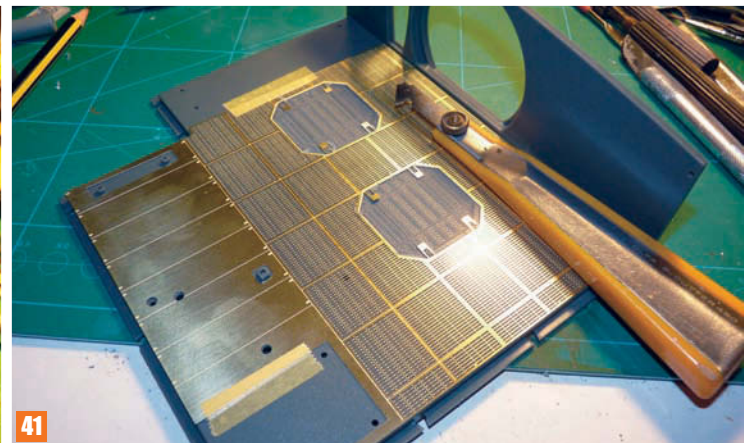
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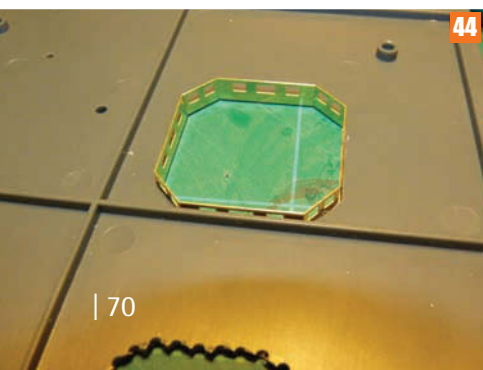
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43



44



45



and centre controls. This was achieved using a combination of regular 3mm LEDs and smaller SMDs (Surface Mounted Diodes). The SMDs can be obtained pre-wired from: www.modellightingsolutions.co.uk.

Care needs to be taken to prevent the SMDs shorting out against the brass so a sleeve of PVC tape was applied (29, 30, 31) then they were carefully inserted into the instrument panel (32).

The regular LEDs were fixed into a small styrene panel and inserted into the underside of the floor. I lined the inside of the centre console with aluminium tape (33, 34).

With the decals in place and backlit, the overall effect is spectacular (35, 36). However, at this stage, due to the piecemeal nature of the build, the rest of the cockpit remains disassembled ...expect an update in a future volume of *SF&FM*.

Meanwhile, hot on the heels of the cockpit set, Paul sent me the Cargo Hold upgrade. The *DeAgostini* kit provides a basic interior featuring

the hold and the various corridors that connect to it. Again the detail is nicely executed but fairly basic or, in places, inaccurate.

The biggest error is in the floor as the kit depicts this as solid panels whereas the set featured a metal grille which pretty much set the standard for all subsequent movie star ship interiors.

Two thirds of the *ParaGrafix* set is taken up by the replacement floor. The detail here is exquisite and is almost too nice to paint! It's also far superior in both accuracy and quality to the various 3D printed versions available for eye-watering prices on the web (37). An additional fret provides the inserts for the open maintenance pits and a decal sheet gives instrument panels and the board for the *Dejarik* game table (38, 39). Also included are some nice numbered medallions to fix to the spines of the magazine binders (40).

Assembly starts by laying the floor etch onto the kit part and marking out the maintenance pits for removal. I used my favourite scribing tool, an *Olfa*



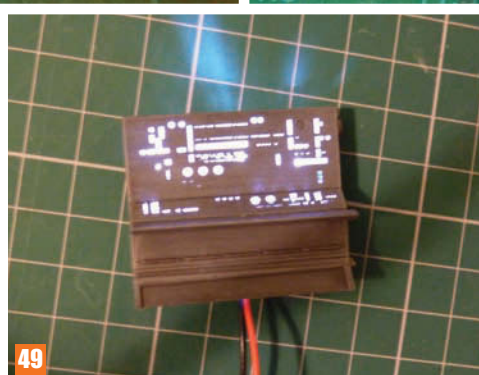
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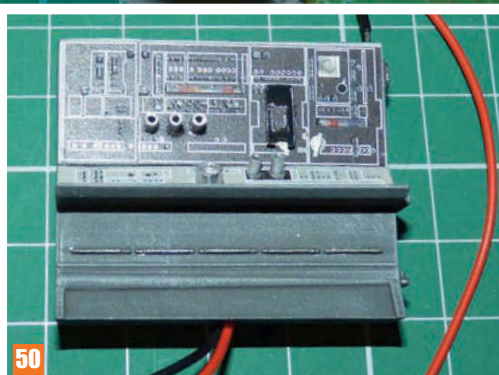
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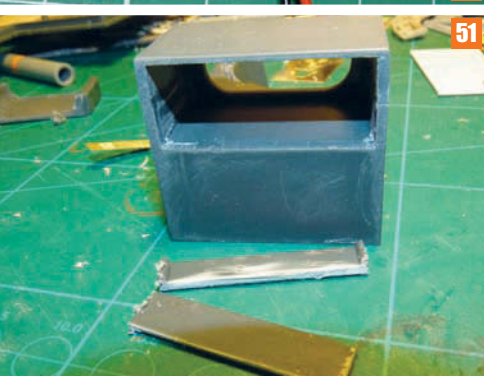
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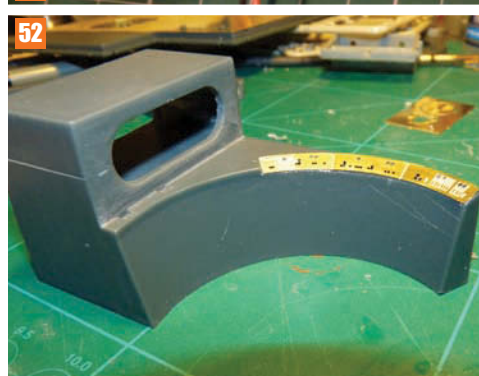
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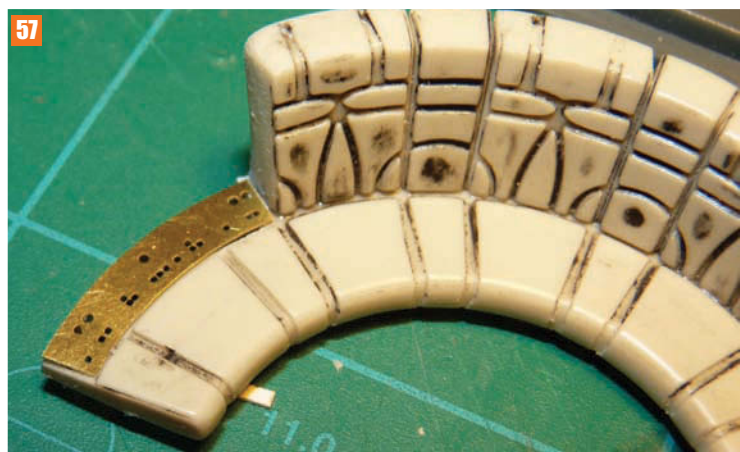
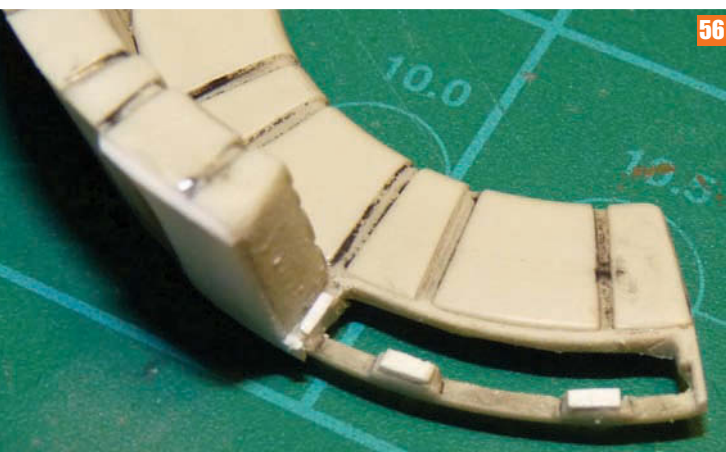
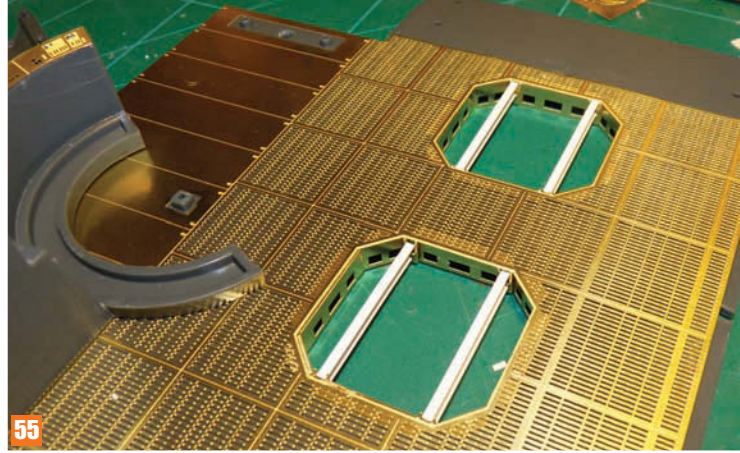
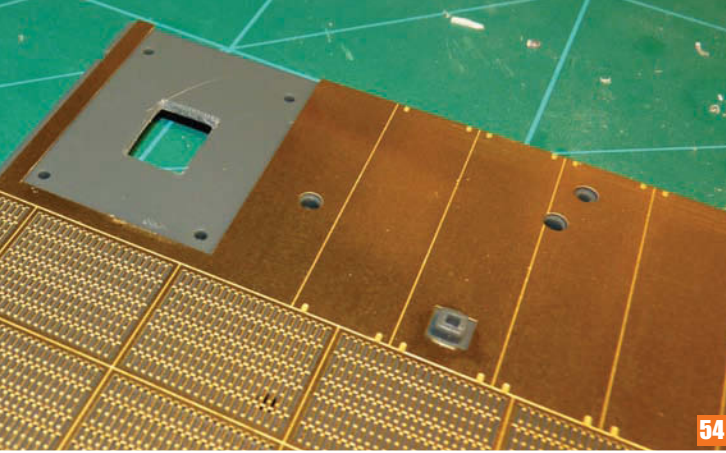
51



52



53



NEW!
Falcon Corridors
 Photoetch & Decal Set
 For the DeAgostini
 subscription kit.

PARA
GRAFIX
 ParaGrafix.biz

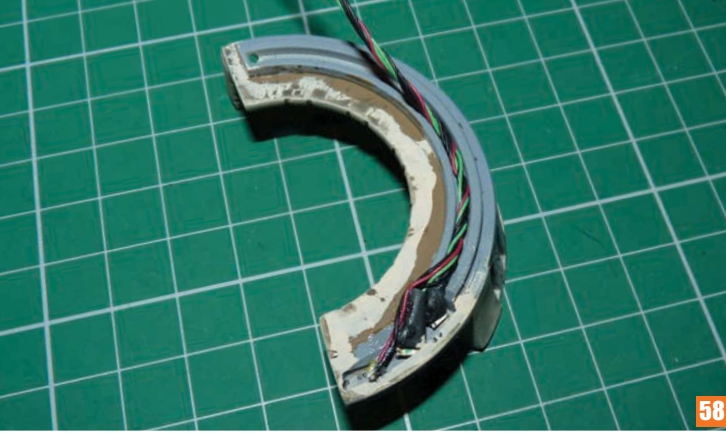
P-Cutter, to scribe the cut lines (41). Note that the correct *ParaGrafix* pits don't align perfectly with the incorrect *DeAgostini* ones (42). The cut outs were chaindrilled then cut and filed to the correct size (43). The brass inserts were then folded and assembled in place (44, 45).

The Nav Computer is dressed up with two brass panels. The plastic controls are cut away and the brass parts fit in their place (46, 47). Once painted, the lighting holes were filled with *Kristal Kleer* and LEDs fitted inside (48, 49). The decals were applied using the same method as on the cockpit and final detailing was done using aluminium tubing (50).

I removed the rear of the bunk housing to allow the bunk assembly to slide in from the rear. The bunk is actually slightly wrong in shape but it was too much effort to alter something that would barely be seen on the finished model (51). The curved instrument panel was cut out and replaced with brass and an access point for wiring was cut out of the seat base (52, 53).

The brass floor was glued in place and a wiring hole cut into the corner (54). *Evergreen* girder section was used for the cross members in the open pits (55).

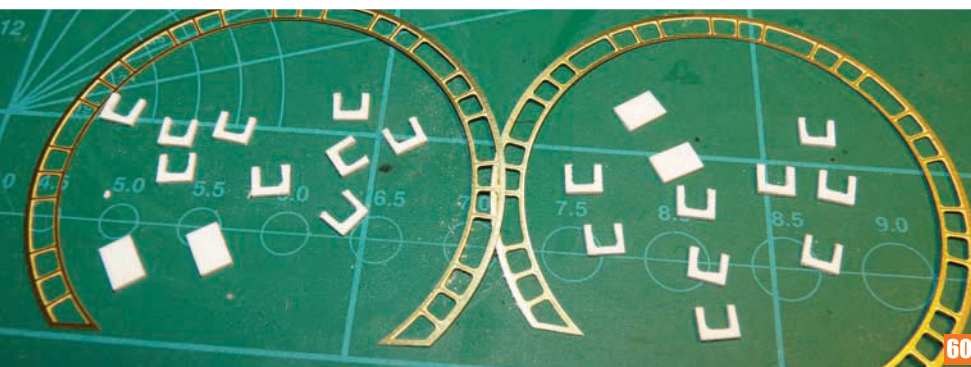
The kit seating was assembled leaving off the last section of backrest to match the screen version. The rear portion was cut away and then built up to take



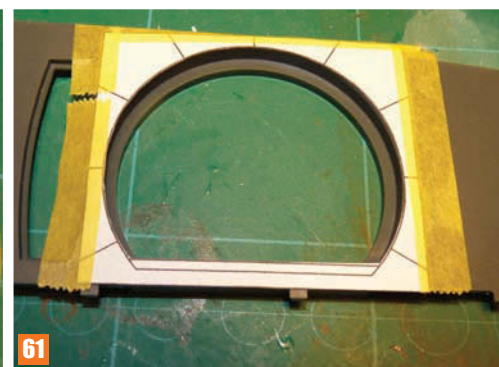
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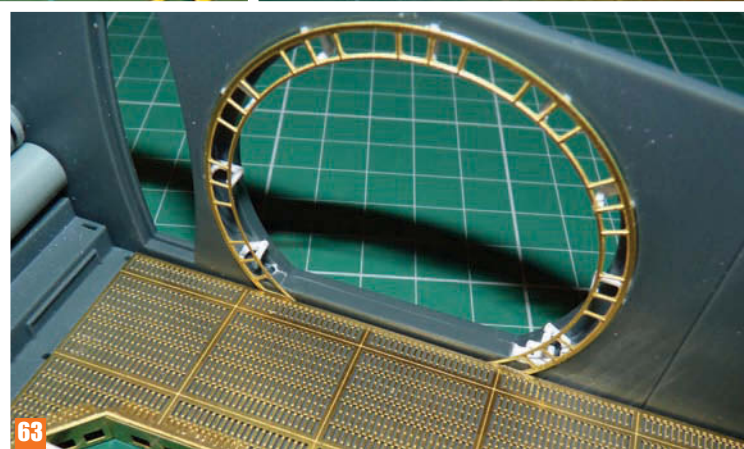
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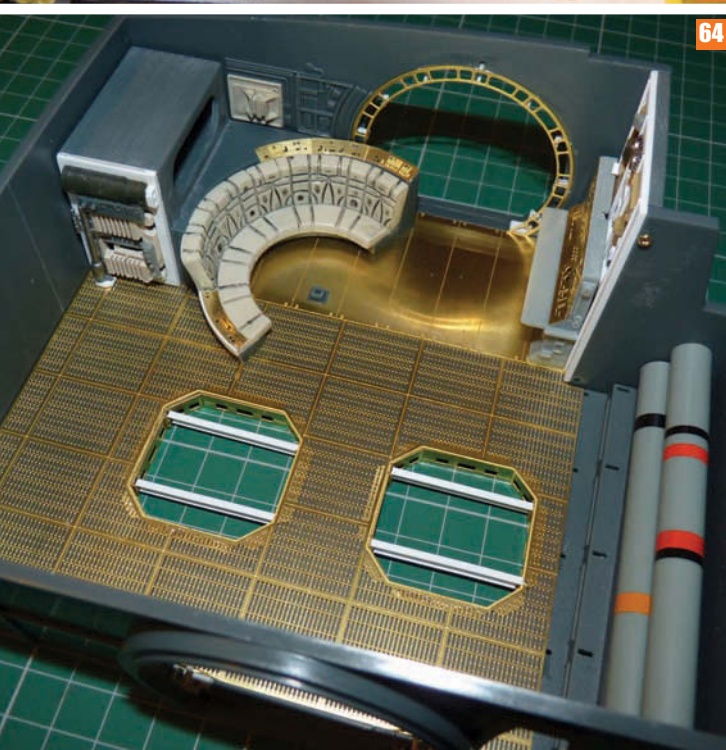
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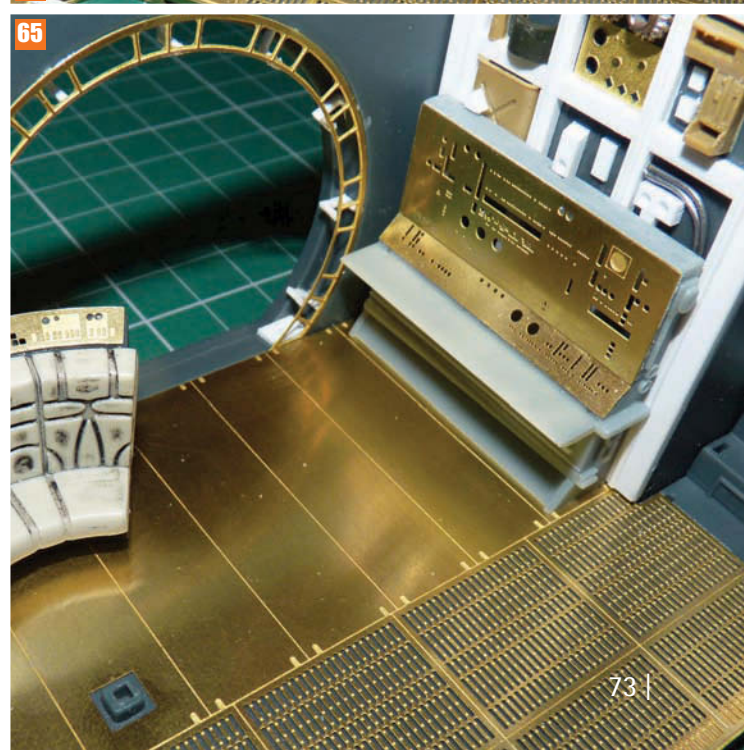
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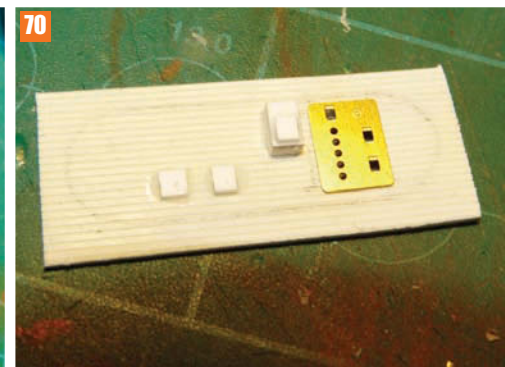
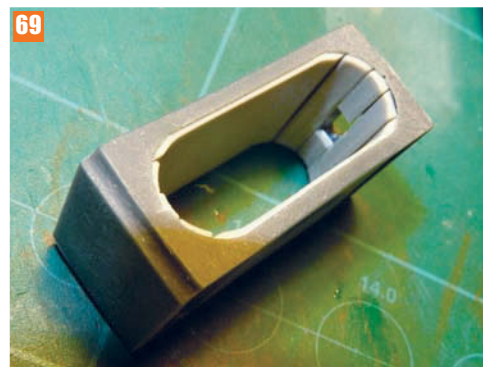
63



64



65



the brass control panel (56, 57). The seat was then painted and three SMDs were installed and the wiring fed between the locating tabs (58, 59).

Another big improvement is the circular door surrounds which are now much finer with the correct hole pattern. These simply replace the kit parts but require some additional supports from styrene strip cut into a C-section using a blade and

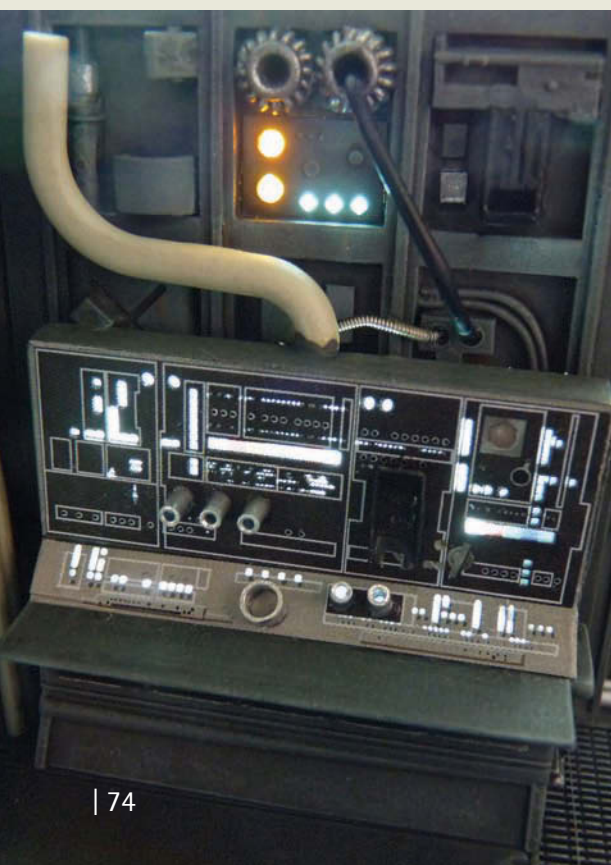
a square file (60). The locations for these are gauged using a paper template supplied in the instructions (61, 62, 63). Once the rings were in place thin wires and cabling made from guitar strings was fed around the inside of the rings to simulate the piping seen on the set. The whole assembly was then test fitted prior to painting (64, 65).

A detailed panel was scratchbuilt to stand behind the Nav Computer (66) and additional detailing was added to the end of the bunk (67). The striplight that sits between the bunk and the seating was replaced by a new part made from clear sprue and aluminium tube which was lit from beneath (68). Finally, the bunk interior was detailed using some spare etched panels (69, 70).

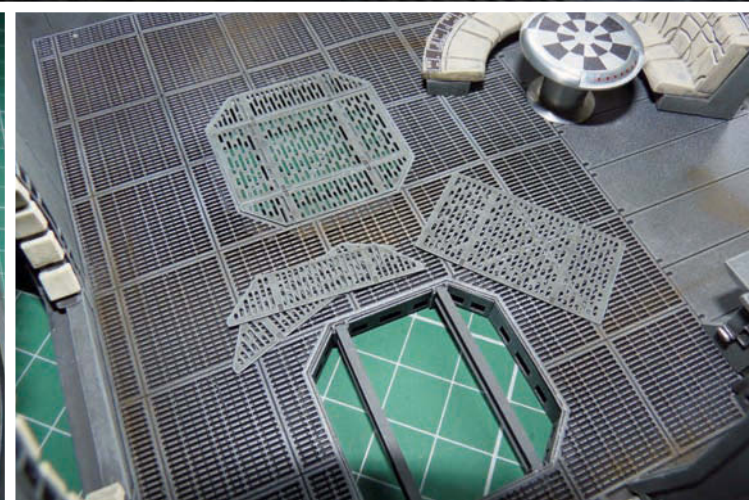
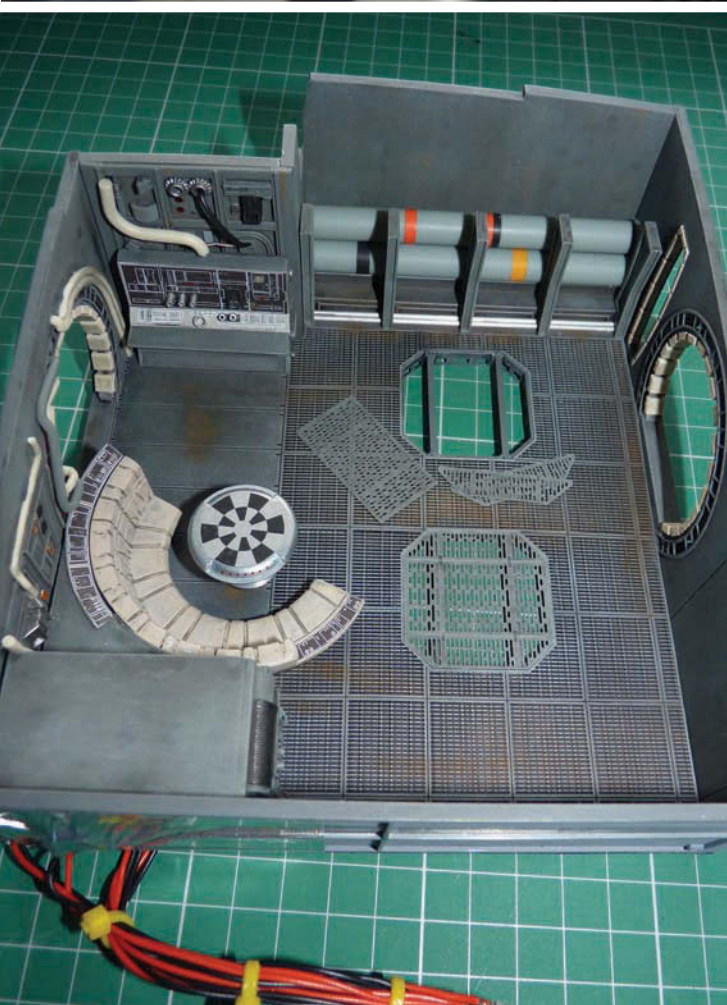
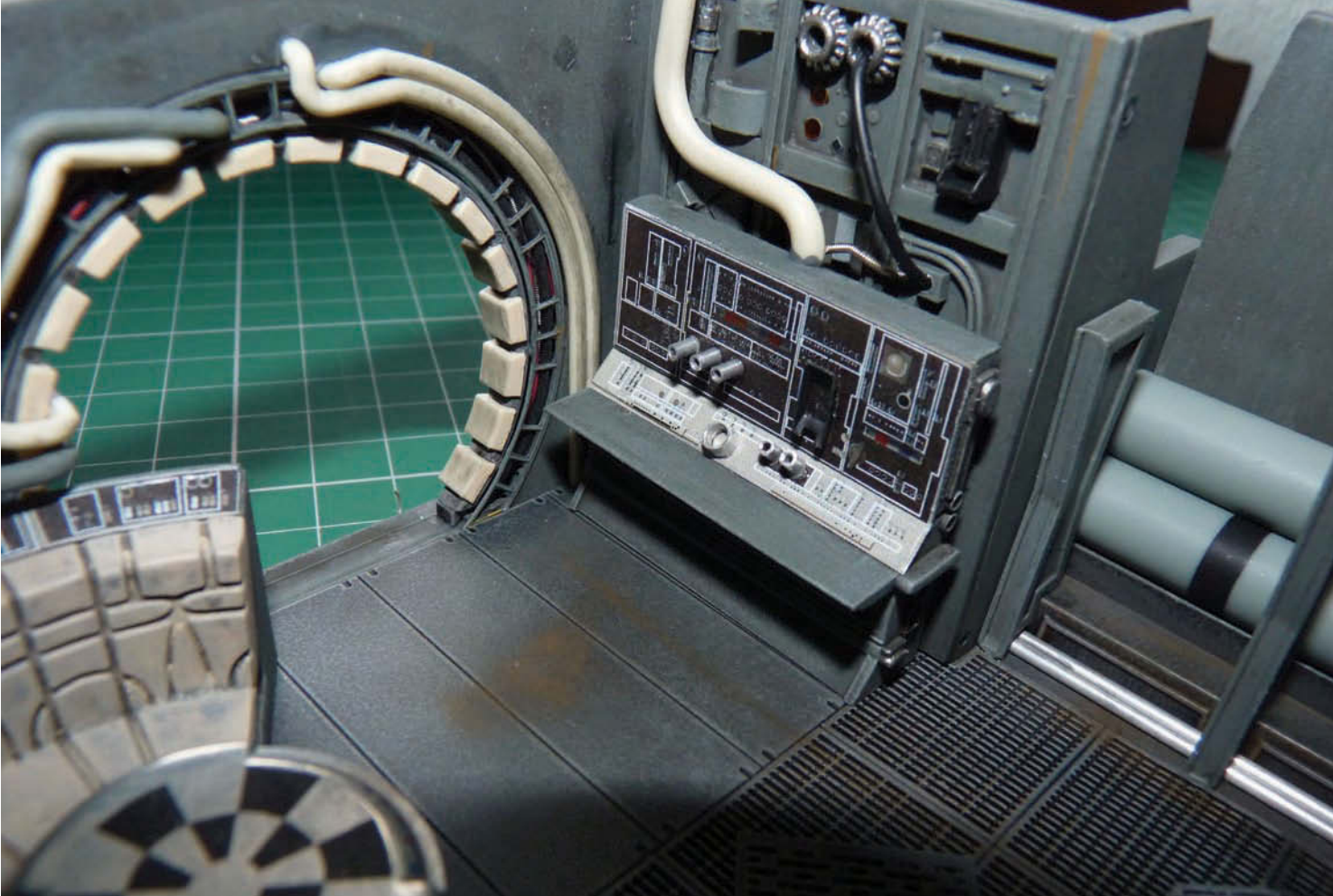
The finished cargo hold is a vast improvement on the kit supplied parts. (See opposite.)

I plan on adding a lot more detail here such as more piping and ducting, barrels and boxes for cargo, the small room through the single door and lighting/machinery inside the pits... however this is all dependent on available space within the hull. As the build has only progressed as far as the lower saucer section then I guess I'll have to wait.

In the meantime, Paul is already working on a set for the corridors and it's likely there will be sets for the quad laser turrets, the engine grilles and probably lots more ...watch this space.



*Review sets kindly supplied by Paragrafix.
www.paragrafix.biz*



HOT FROM THE MOULD

continued!

MOEBIUS MODELS

817 1/32 VTTBOTS Flying Sub Revised

Based on Irwin Allen's *Voyage to the Bottom of the Sea*, this highly-detailed kit has been engineered from digitally scanned images of an 18-inch prop miniature, and has the exact hull shape of the TV submarine, making this the most accurate *Flying Sub* model kit produced to date. Full interior cockpit is viewable through the removable docking ring and front windows, and the rear compartment has a hallway to the rear outer hatch. This new edition of the kit features improved hull parts fit and now includes in-scale figures of *Admiral Nelson* and *Captain Crane*! The finished 1:32 scale model has a hull diameter of about 14 inches and includes display stand.

964 1/25 Batman v Superman: Dawn of Justice Batmobile

The new *Batmobile* from the highly anticipated *Batman v Superman*, in theatres next March. Kit available first of the year; super-detailed and highly accurate, based on visual effects files used for the film.

965 1/350 Lost in Space The Derelict

Far from Earth and hopelessly off-course, the crew of the *Jupiter 2* have their first encounter in deep space with a massive, mysterious spacecraft – a seemingly abandoned, ancient derelict. Pulled into the spacecraft's hanger by an automated tractor beam, the *Robinson* family may find more than they expected... *Moebius Models'* kit of the *The Derelict* is a faithful recreation of the craft as seen in the second episode of *Lost in Space*. With detailed hangar doors that may be assembled in open or closed position, and a miniature, in-scale *Jupiter 2*, the kit features a display stand and

bonus, optional printed hangar bay interior. Should be available by the time you read this.

2946 Jonny Quest Dragonfly Pre-finished model

For the first time ever, the supersonic jet from the groundbreaking animated series, *Jonny Quest*, comes to life as a detailed, fully-finished styrene model. The model comes ready to display, featuring crisp, engraved panel detail and display stand. Offered in a collectible window box that recreates *Dr. Quest's UNICE* computer from the series.



Krypto the Superdog Diamond Edition

Celebrating *Krypto's* 60th Anniversary, this approximately 1/6-scale easy-to-assemble vinyl kit includes a cloth cape and is also offered as a pre-finished version, fully painted and assembled, in a collectible window box. Available early 2016.



Lost in Space reissues

Lost in Space packaging updated for a cohesive line look, and celebrating the classic TV series' 50th Anniversary, the full line of kits is now available again, including the *Jupiter 2*, *Robot B9*, the *Chariot* and the *Space Pod*.





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research story

Brian Johnson
interviewed by
Mat Irvine

Eagle 1
studio miniature
restored



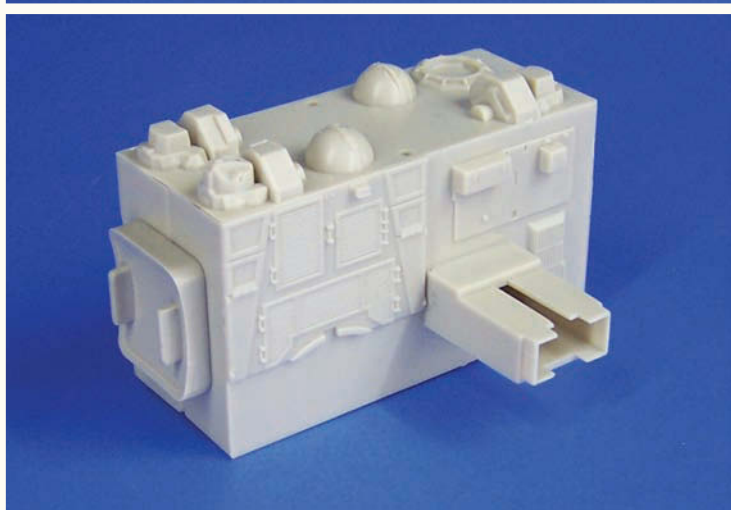
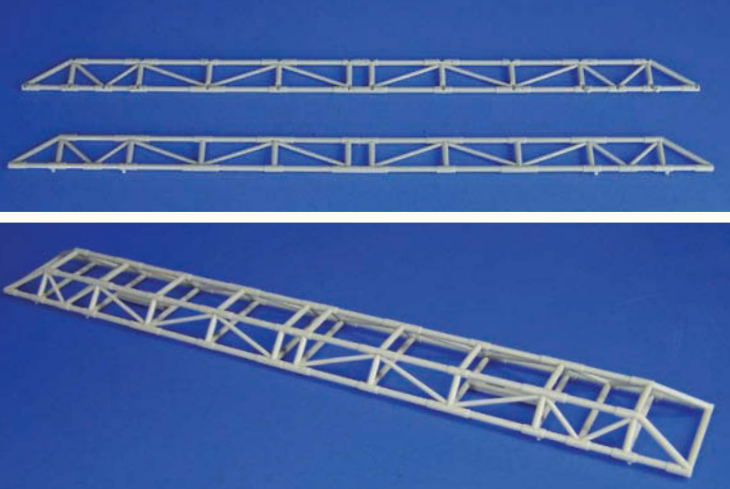
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- Building MPC's deluxe lab pod 12-inch Eagle!
- Rogue Studio's 44-inch replica Eagle!
- Jim Small recalls a forty-year love affair with the Eagle!
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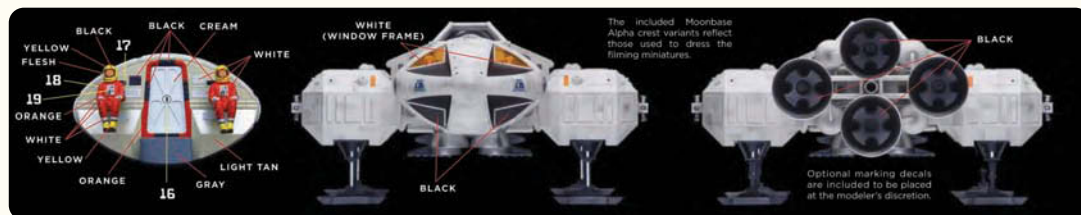
84 page, A4 magazine: £7.99



the actual kit will be liveried in. Also bear in mind that said test shot was delivered in a series of plastic bags, sans packaging or decals (a comprehensive decal sheet would arrive at a later date, hot from the presses, but its absence at this early stage would necessitate the painting on of some features that are represented by decals should the modeller wish to use them) and with an early version of the instructions. Other than these

studios for that season – *Eagle 1* – its appearance replicating this largest miniature as seen in early publicity photographs and the first few episodes of 1999. This means that the articulated oleo struts of the 44-inch have been faithfully reproduced (the hinged rear linkage arms are absent on the 22-inch versions) together with a fully detailed complex fuel tank section with supporting framework.

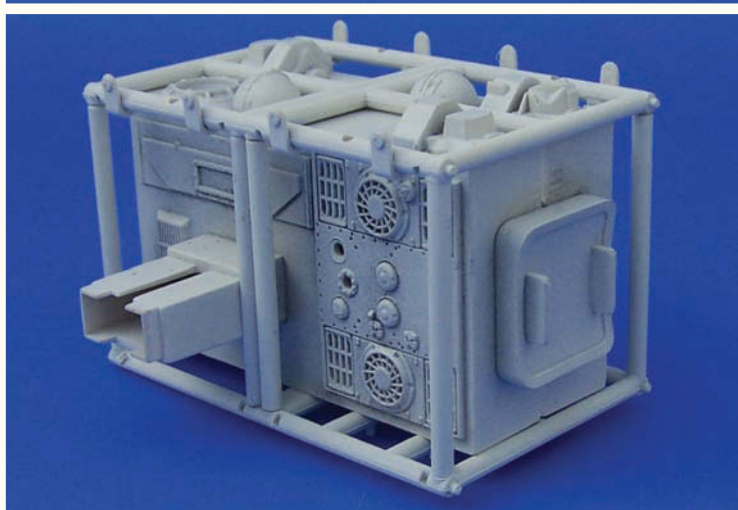
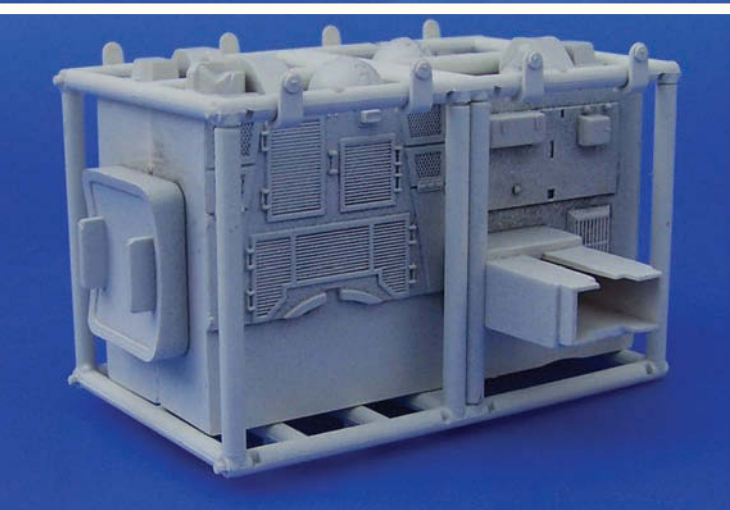
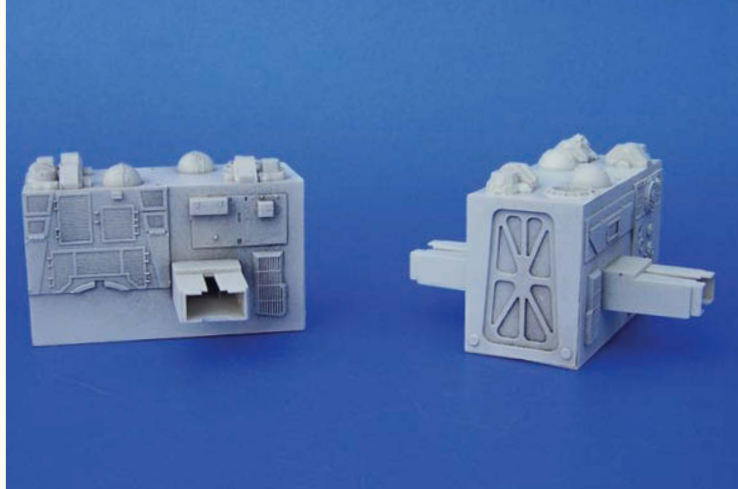
Above: spine side frameworks; beak and interior components; two views of the front walkway.



differences, eager *Eagle* fanciers will be presented with a 99-percent similar package to the one I discovered in the plain box that arrived recently, and, believe me, that package will not disappoint.

The kit is based not on one of the less-detailed, comparably sized 22-inch *Eagle* miniatures created for the first season of *Space: 1999*, but, rather, on the first 44-inch model to be delivered to the

To say that the level of detailing is comprehensive would be an understatement. Over 300 parts go to make up the kit, and, apart from the obvious components assembling into the various modules of the *Eagle* – i.e: ‘beak’, leg pods, landing legs and feet, spine, front and rear cages, inner walkways and passenger pod, there is a wealth of accurate detailing here translated from the 44-inch that is certain to make this release an

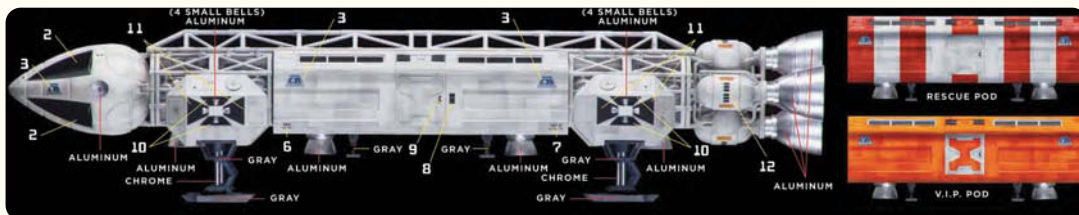


Above: leg pod assembled; walkways pre-shadowed and painted; two views of the inner front cage in place.

Inset (left and right): painting guide from the box art packaging.

(Oh... Just one final thing before we do so... I should mention that the Eagle will be released in standard, all-plastic form, with the option of a separate aluminium upgrade kit comprising all rear and underside engine bells plus oleo struts for the legs. Such an upgrade was delivered a couple

or partially, a variety of *Eagle* spines in brass or white metal produced by various garage manufacturers, and always the amount of work involved has been extensive and exacting. By contrast, the assembly of this injection plastic version was a breeze. The two sides of the framework come together from halves that slot into each other at the central point. Each of the individual linking top/bottom/front/back spars is then added, the pieces seating perfectly and the unit

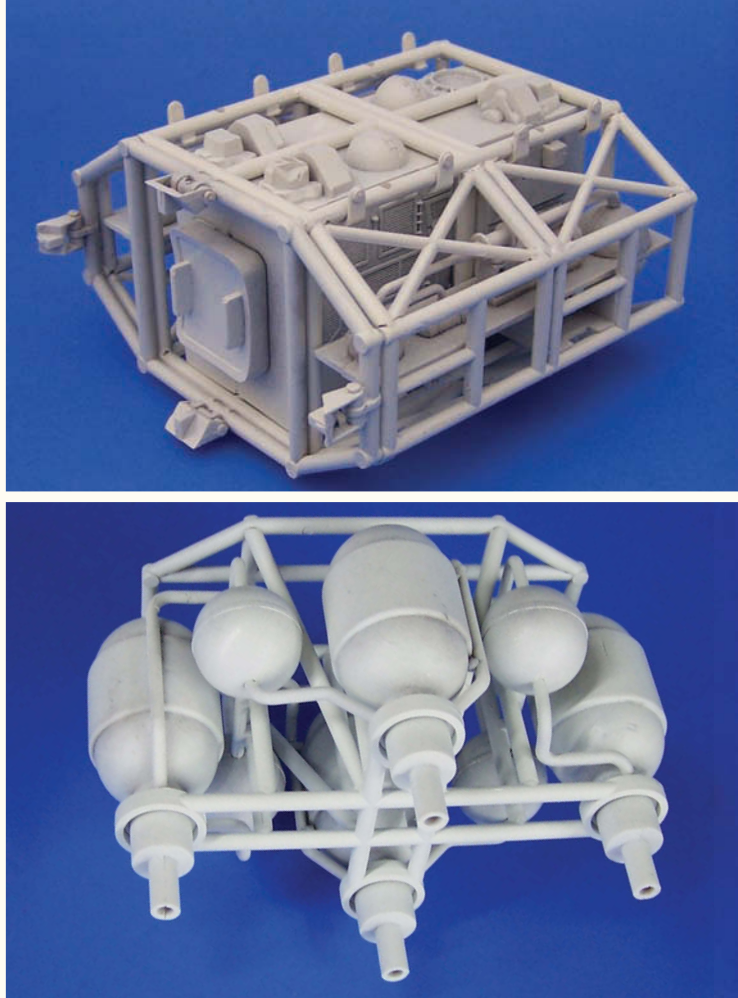
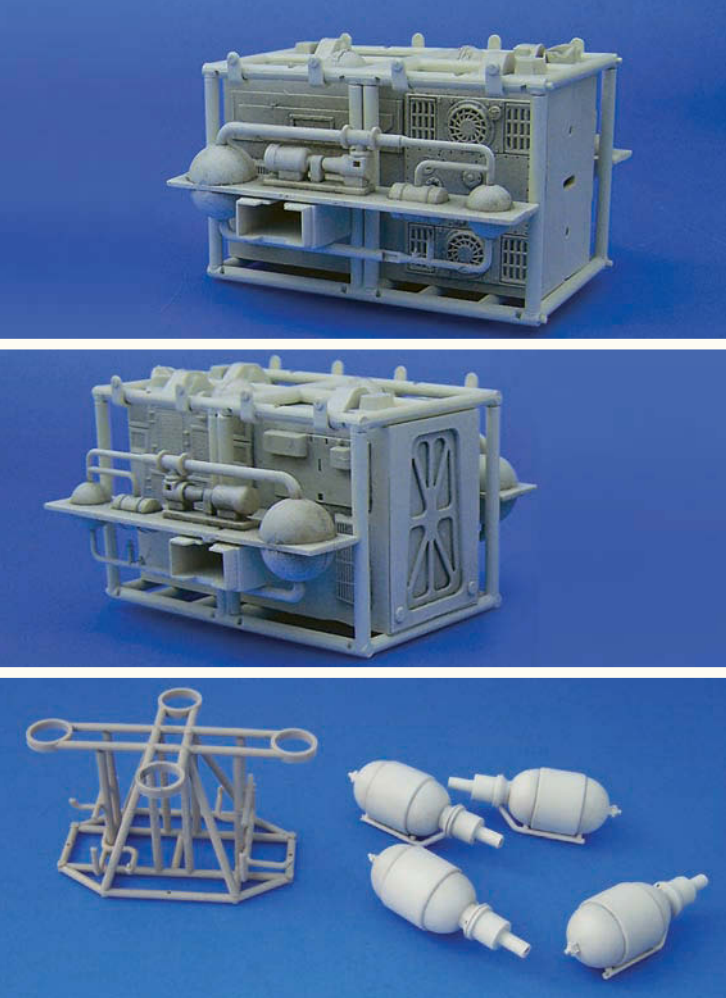


of weeks after the test shot arrived, and so, naturally, I chose to use the superbly produced deluxe metal pieces for the build, although I will comment on their plastic counterparts.)

Ship Building

Rather than begin with the beak, as per the instruction sequence, I decided to start with the dorsal spine. In my time I've assembled, either wholly

becoming quite strong and rigid for a plastic representation of this load-bearing feature once everything has been glued in place. The spine took me just a morning to complete, working slowly and carefully – a remarkably small amount of time for such a complex section that in past incarnations from other manufacturers has taken days to assemble and has involved soldering, filing and two-part epoxy.



Setting aside the spine for the glue to dry I moved on to the top sections of the ‘cages’ that surround the central walkways to the front and rear of the craft. On the 44-inch studio miniature these sections were bolted to the spine via sixteen J-shaped connectors, four to each side of the front and rear sections. These are provided as separate pieces which simply glue into depressions in the cage top frames, thereafter slot-locating to the spine at a later stage.

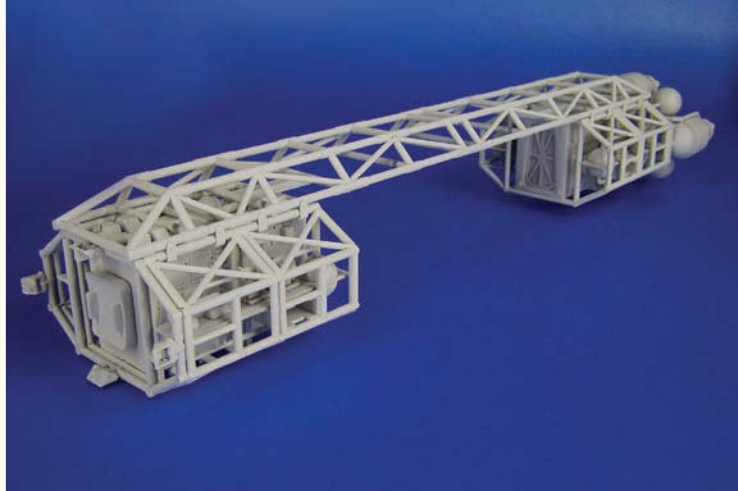
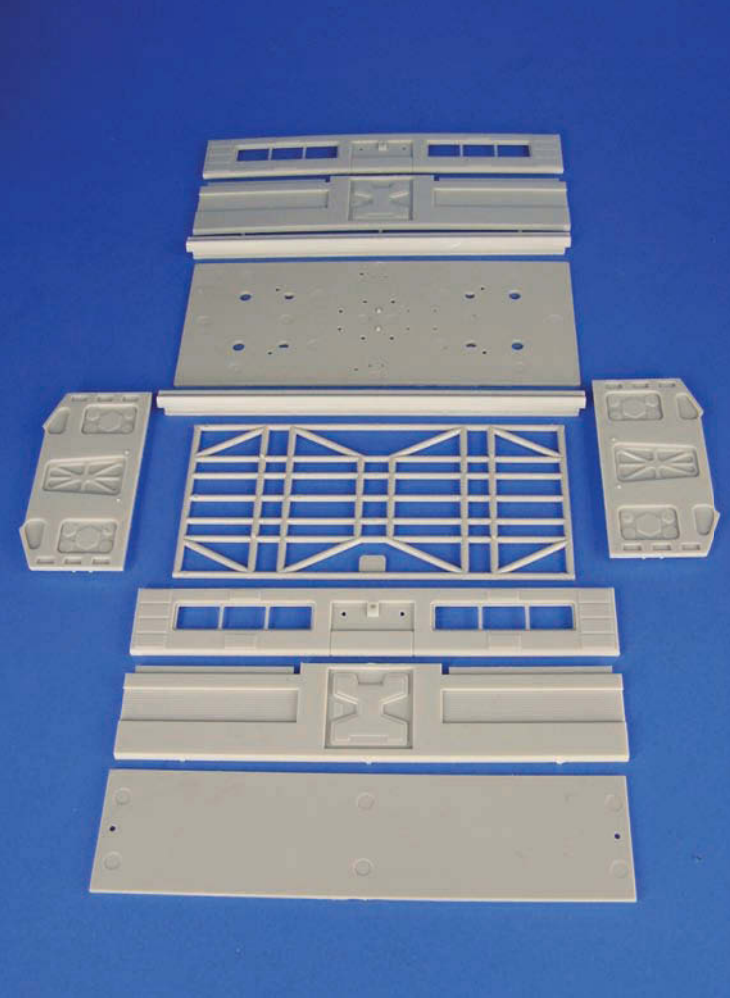
The time it took these top section assemblies to set allowed the two central box ‘walkways’ to be assembled. One of the fascinating aspects of the *Eagle* that helped sell it as a realistic piece of space-going hardware for me was the craft’s ‘inner workings’, glimpsed tantalisingly through the open fretwork of its supporting spaceframe, and here a glorious job has been done in recreating the (mostly kitbashed on the original) mysteries beneath the frameworks. Each walkway comes together from two halves plus top and back pieces (these latter featuring the distinctive doors that provide access from the walkways to the passenger pod), the front assembly requiring the addition of a single-piece

linking ‘sheath’ that connects the walkway to the beak. With the walkways assembled the detailed ‘shelves’ that sit on top of the rectangular slots that accept the leg pods (more on this later) could be assembled – each coming together from two halves plus an additional pipe piece for the rear shelves which subsequently slots into the rear of the cage assembly. It’s rewarding to view all this detailing clearly for the first time, and also very satisfying to see it reproduced exactly at half scale for this kit. Test-fitting the parts, however, I discovered a fairly prominent seam around the join of the shelf unit halves which needed to be scalped and sanded away before they would locate squarely on the rectangular slots they sit against.

And that reminds me...

...A note on seams: *At this point I should point out that, because of the nature of the injection plastic casting process, slight seams do appear on all the framework parts. These are not really noticeable until you begin the paint process, except in a strong light, so it is worth examining all framework components under a daylight bulb and*

Above:
inner cages
complete plus side
shelves added;
front cage
assembled around
walkway;
fuel tank
framework and
assembled large
tanks; rear tank
assembly complete.



Above: taking a scalpel and fine sandpaper to them prior to assembly and painting. And now back to our normal transmission...
 basic pod parts; Eagle cages and top frame in place;

pod upper completed prior to detailing.

With the walkways and 'shelves' together these sub-assemblies needed to be painted before I could encase them within their surrounding cagework, so I duly primed them in white auto primer before pre-shading the raised detailing and the recesses in the doors with *MIG Russian Earth Modelling Pigment* applied with a brush and wiped off with kitchen towel to the required consistency. The pre-shading was accomplished with a fairly light touch as I simply wanted to bring out some subtle shadowing in the detail that would then give depth to the components that would be glimpsed through the completed cagework. The primed and pre-shaded pieces were then oversprayed with the universally accepted contemporary equivalent of the original white (believed to be a white-grey primer produced by *Trimite*) used on the *Eagles: Ford Diamond White* auto spray, which was then dulled down with an overcoat of *Citadel Purity Seal* varnish. The top and bottom sections of the front and rear cage pieces were then also primed and sprayed, together with the eight linking side

spar pieces that connect these around the walkways, before assembling these pieces (NB: one of the four linking spars to each side of each walkway has an indent in it to fit around the slot that accepts the leg pod 'outrigger' – don't mix this up and glue it in the wrong position.).

The cage sides – again needing to be primed and painted before assembly – were then added to complete the front and rear walkway cages. Each side cage makes up from upper, middle and lower sections, and to ascertain the correct angles for these sub-assemblies that will subsequently connect to the front and rear cage frame pieces and top and bottom cage sections it is a good idea to dry fit them against rear part B63 to check the orientation of the parts before the glue between the pieces sets. This is recommended in a step added to the instructions that was not present in the early incarnation of these I received. Subsequently I found that my front walkway cagework was a wee bit off when fitting it to its front locating frame, and required some gentle coaxing into shape plus the filling of certain of the joints with a little *Perfect Plastic Putty*.

Next up was that complex rear framework that houses the fuel tanks, and this proved to be the most challenging part of the entire build, as it had in previous *Eagles* I've built (with the exception of the infamous, over-simplified original MPC/Airfix offering). Following the instructions you take the rear cage 'bulkhead' framework (part B63) then add the four linking struts (parts M64) and let dry. You then glue the diagonal struts (parts M67) to the rear cruciform piece that holds the engine bells (Part B75) plus additional struts to hold the fuel tanks (parts N65 and N72). With these two sub-assemblies set you next connect one to the other. ...Don't get me wrong, they DO go together eventually, but I found the exercise of coaxing the eight points of connection into their corresponding slots rather like trying to make peace between two estranged spiders by forcing them together to shake hands (...um...*legs*). I don't know for certain, having followed the instruction sequence detailed above, but I feel this procedure might be a whole lot easier if all the connecting struts are first glued to the rear cagework bulkhead, meaning you only need to fiddle about (a technical term) in one

direction rather than two when locating those eight contact points to the cruciform piece.

With this sub-assembly completed and primed and painted, I could make up and add the rear fuel tanks and the pipework detailing that connects these to the cruciform piece. As with all the major components of this kit, the parts came together with hardly a seam in sight, and were pre-shaded using the *MIG Russian Earth* to give a sense of depth to the assemblies. A final step, after connecting the rear tank assembly to the rear walkway cage frame, was to add the central pipe section that actually served as a rear mounting point on the original 44-inch miniature, this threading through the centre of the cruciform section back to the walkway bulkhead, where it locates into a couple of slots.

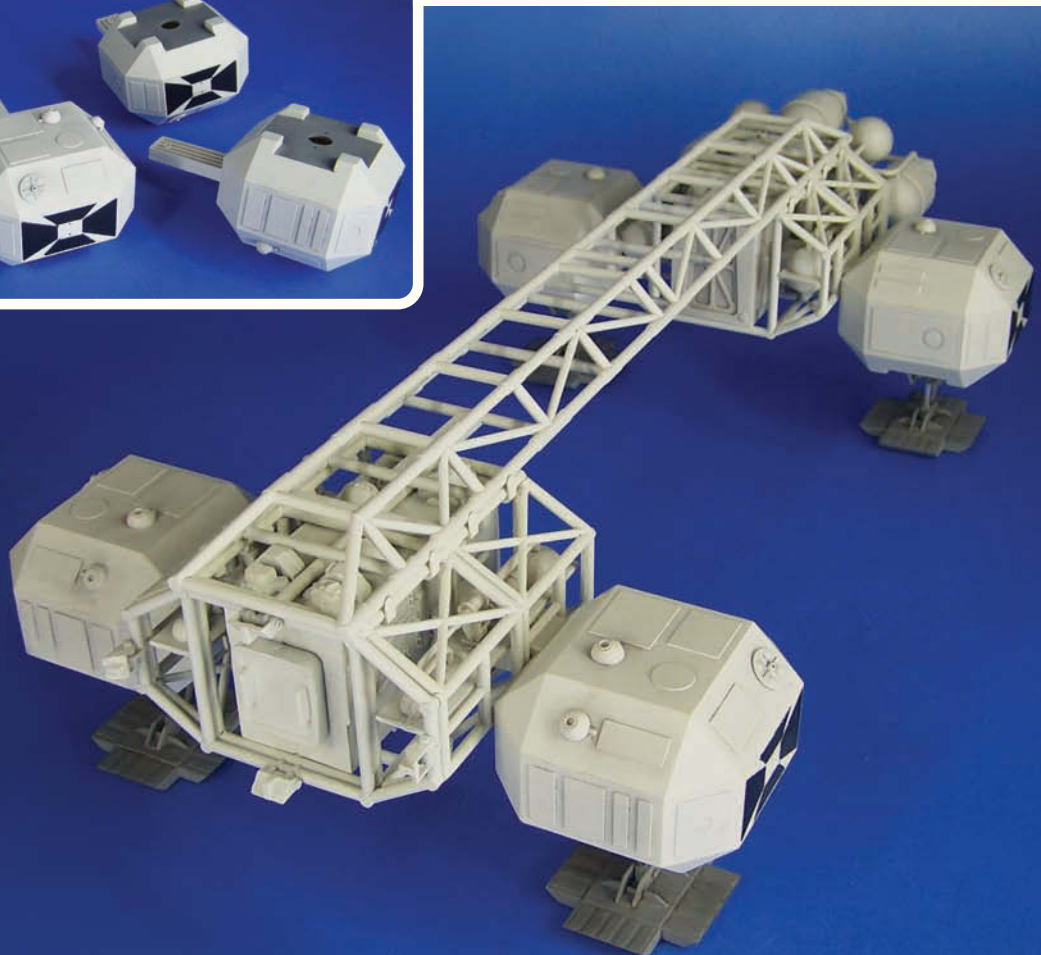
Leg Pods

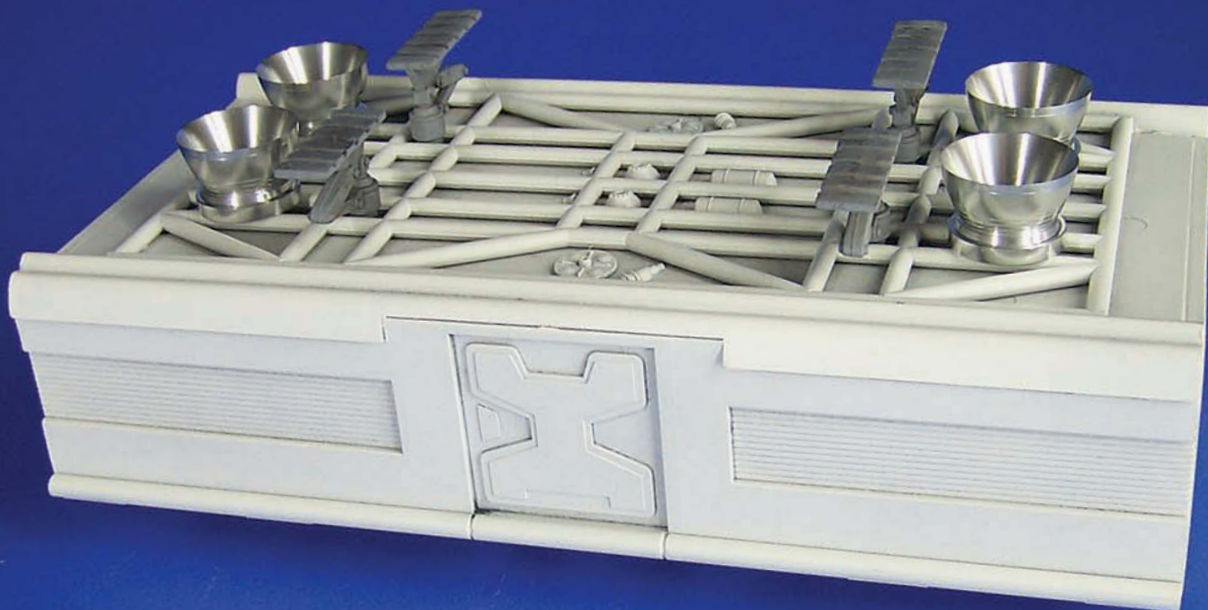
Each leg pod is constructed from seven pieces, with a couple of separate detail parts needing to be added, plus a five-part RCS thruster assembly. Construction is simple and problem-free, but I would recommend that you lightly file the edges of the inner square hole that accepts the top of the oleo strut

Below:

leg pods painted (minus RCS thruster quads); leg pods almost complete and test fitted.

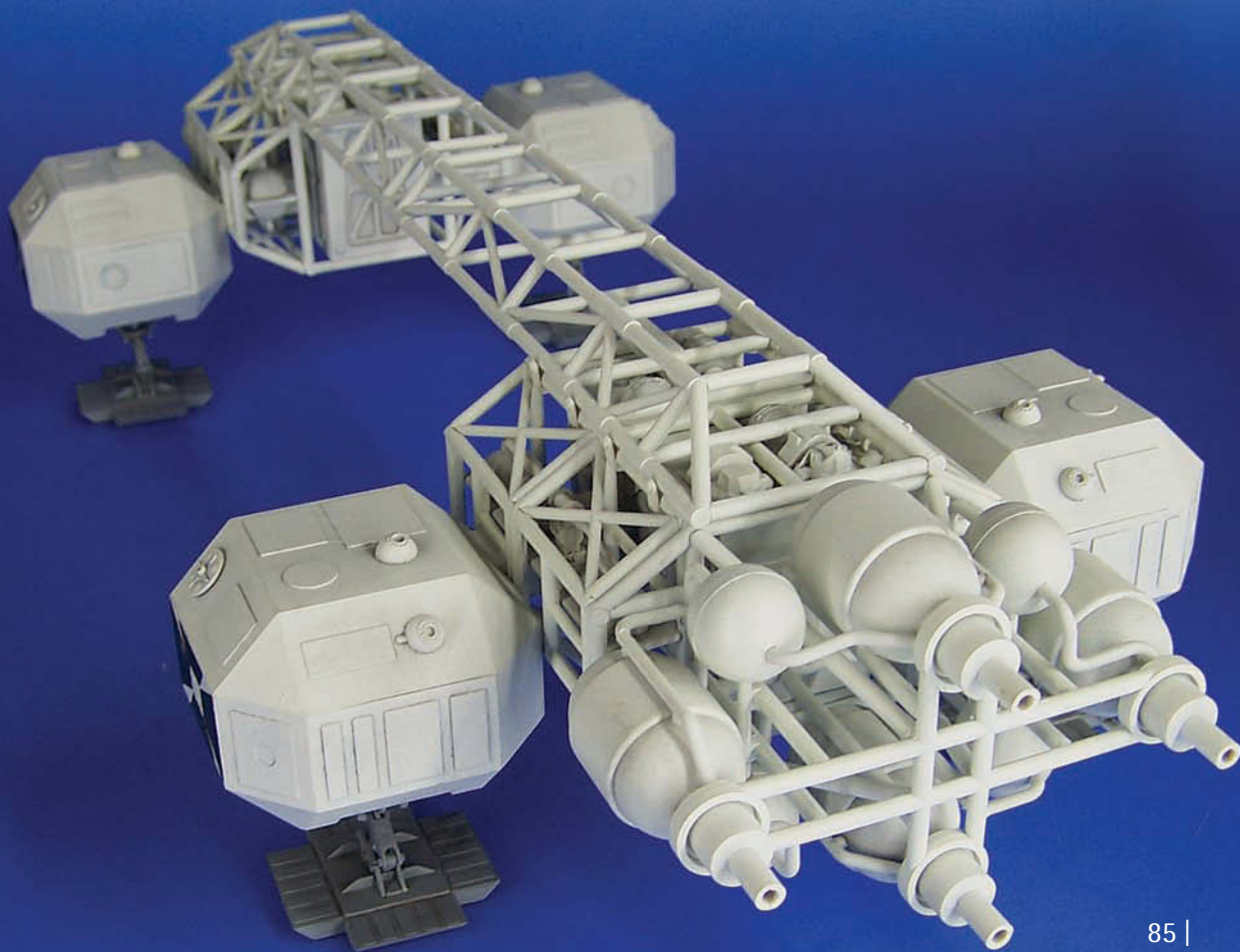
Opposite top: pod engines and feet in place; rear view of leg pods almost complete and test fitted.

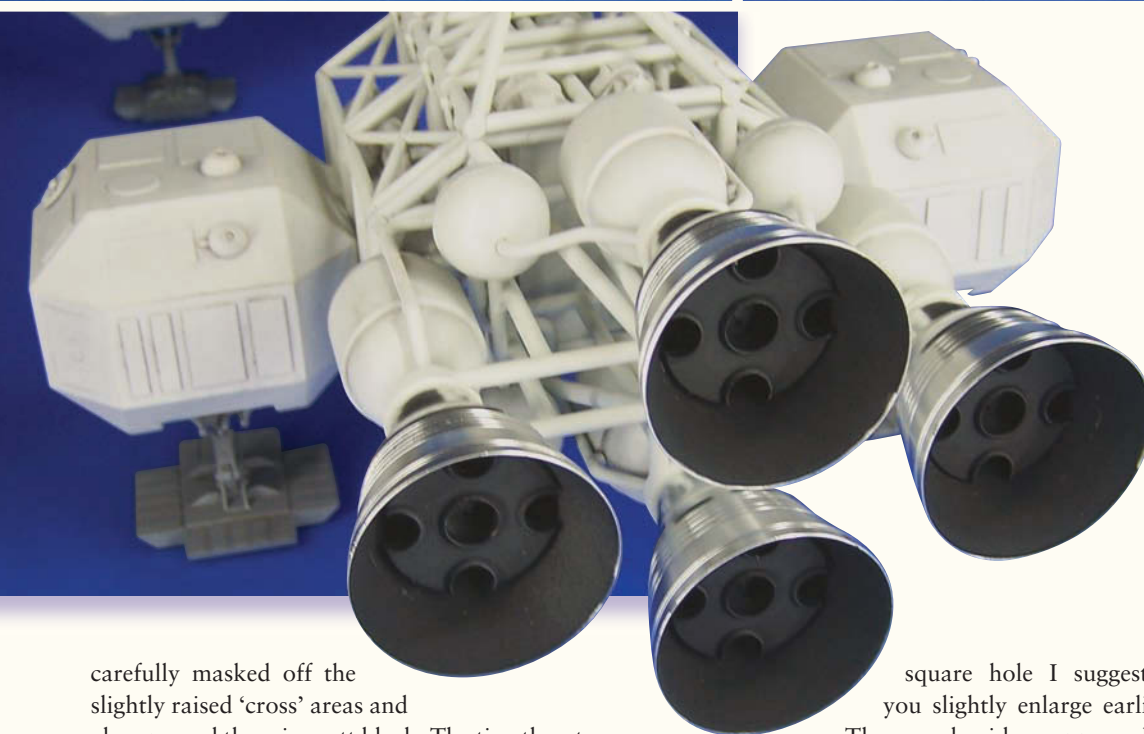




to enlarge it slightly before gluing the leg pod together to avoid any difficulty in locating the struts correctly at a later stage. As throughout the build, joints here are neat and crisp and require only a minimum of light sanding. Before the RCS clusters can be added to the pods, the pods need to have those distinctive 'crosses' that sit behind the

thrusters picked out in black. These features are provided as decals, but the decal sheet was at this point still many weeks away from arriving, so I primed and pre-shaded the four pods, sprayed them with the *Diamond White*, painted their undersides matt black (these sections are also represented by decals in the production kit) then





Top left: plastic engine bells and components.

Above: engine bell inners sprayed matt black plus plastic end caps.

Left: completed main engines in situ. Note: rear face *Gemini* domes on rear leg pods were later removed when referring to final instructions.

Opposite right: underside lift engines are added to main body.

carefully masked off the slightly raised 'cross' areas and also sprayed these in matt black. The tiny thrusters (be very careful when snipping these from their sprues – they bounce, and I lost one on the kitchen floor and had to shamefacedly request a replacement from *Round 2*) were superglued to the central blocks that hold them, the units were primed and painted *Diamond White*, *Purity Sealed*, then the thrusters themselves brush painted in a bright silver and the units glued to the leg pods, completing these sub-assemblies.

Legs and Foot Pads

Four springs are provided with the kit to enable working, sprung landing legs to be incorporated into the build. First a spring is slipped over the top of each oleo strut (the instructions recommend that you anchor one end of each spring to its strut by gluing it in place but I can't see this ever being a permanent marriage – even if you epoxy the spring in place it will work loose with repeated stretching and contracting) and the strut is then fed into the leg pod via the central circular hole in its underside, its square top end locating into the

square hole I suggested you slightly enlarge earlier.

The underside upper leg framework (coming together from two halves and needing to be sanded on its underside to allow it to sit flat against the leg pod) then slides over the oleo strut and glues in place against the underside of the leg pod, trapping the strut in place. The revised version of the instructions received later in the build show the foot pads as two-part assemblies, although in my kit these were each comprised of a single piece only (with additional side pieces that slot in to either side of the oleo strut) and these glue onto a peg at the bottom of the oleo strut once the strut has been held in place by the underside framework. Finally, the press-fit linkage arms are connected to the foot pads and leg pod oleo strut underside frameworks to complete the articulated assembly. Needless to say, the leg components, with the exception of the aluminium oleo struts which were left in bare metal, required painting *before* assembly, the foot pads, linkage arms and upper underside frameworks being finished in *Humbrol Grey Primer 1* and the topsides of the foot pads being



highlighted with *MIG Pigment Light Dust* before being sealed with a spray of *Purity Seal*.

As stated, I used the aluminium oleo struts from the accessory set in constructing the legs, and found that I needed to file down their top ends with a mini-drill to allow them to locate into the holes within the leg pods. This lengthy action could have been avoided had I filed the locating holes slightly larger first (or, indeed, and in a preferred method, located the struts whilst actually assembling the pods, effectively building each pod around its landing leg).

The completed pods with their long, rectangular 'outriggers' slide in and out of the walkway slots exactly as they did on the 44-inch studio *Eagle 1* – a great feature that allows you to add extra paint detailing to the body at a later stage if you choose to, or to disassemble your *Eagle* model for safe transportation to friends' houses or to other locations carefully selected

for the sole purpose of making people insanely jealous.

Passenger Pod

Assembly of the passenger pod and its underside detailing, featuring a convenient, single piece underside framework and, once applied, resplendent with the separately moulded kit-bashed detailing you won't find on any other *Eagle* kit, is quite straightforward, with some slight filling needing to be undertaken where the pod sides meet the end walls. It should also be noted that the pod underside floor plate featured a number of slight sink holes that didn't become apparent until a coat of primer had been applied.

Having already stuck the underside frame in place it was difficult to completely eliminate these via some careful sanding, but I'm guessing that this minor problem will have been taken care off in the production kit.

I left off the rectangular roof piece until I had primed and painted the pod, this allowing me to leave the windows off until all spraying had taken place. The window pieces were then sprayed matt black on their undersides before being carefully positioned from inside the pod, via a minimum of liquid poly applied to their outer frames, working through the hole where the roof piece would be located. Completing the assembly by adding the roof, I next painted the four pod feet in primer grey, weathering them with *MIG* pigments before sealing everything with *Purity Seal* then adding them to the underside, along with the four aluminium engine bells from the deluxe set, which simply pushed securely into position. The instructions show these as having their interiors painted matt black. Whilst I'm sure the rear bells were black on the inside, certain shots in the series show the underside bells to be bare metal, so I left them in their gleaming aluminium state. At this point I also added the underside engine bells to the front and rear cage sections. Each of these locates onto a pair of pegs on the cage undersides, and each bell was epoxied in place as I didn't feel superglue would be sufficiently strong to bond the aluminium to the plastic.

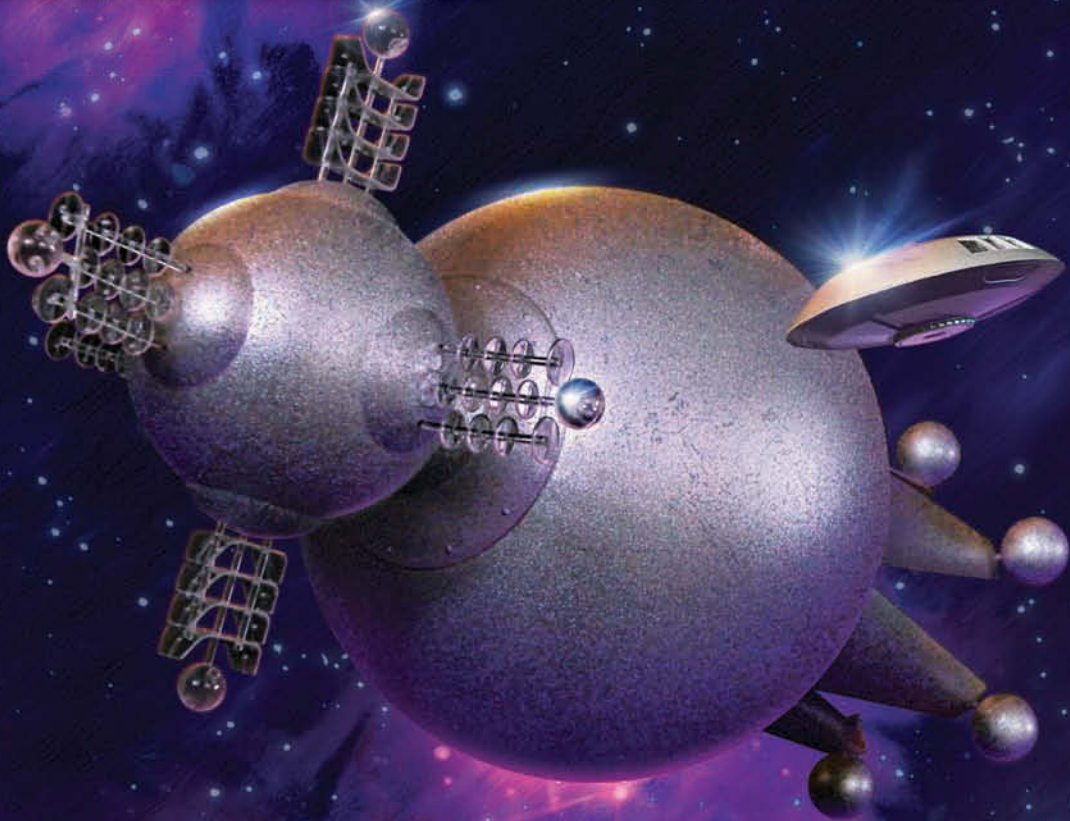
...And that's all he wrote for this section of the build. **Next time, in the concluding part of this feature:** assembling and detailing the beak and its interior; weathering, painting and decalling the body of the *Eagle*, and a review of the actual production versions of the kit and accessory set.

Special thanks to Jamie Hood at Round 2 for the test shot provided for this review, and for additional help throughout the build.

...And for additional coverage of this kit, the full production story behind it, an interview with Brian Johnson, plus many other drool-inducing *Eagle* modelling features, see our *Modelling the Eagle* special ad elsewhere in this volume.



**‘Calling Aeolis 14 Umbra.
We have sighted your
spaceship. Do you have
instructions?’**



Building the Moebius Derelict from Lost In Space

Mark Myers



1



2



3



4



5



6

*Editor's note: ...Poor Dr. Smith! In the second first-season episode of **Lost In Space** the bad doctor initially believes the colossal spaceship encountered by the crew of the Jupiter 2 has been sent by the sinister organisation that has employed him to sabotage the Robinsons' spaceship. Imagine the pain; THE PAIN! as he discovers that 'the Derelict' is, in fact, home to some truly alien 'bubble creatures'. In the*

following article Mark Myers builds a test shot of the sizeable new 1/350th. Moebius release that recreates this impressive and highly unusual alien spaceship...

On September 15, 1965, CBS launched a new and exciting television series from director/producer Irwin Allen called **Lost in Space**. The series lasted three seasons and featured the



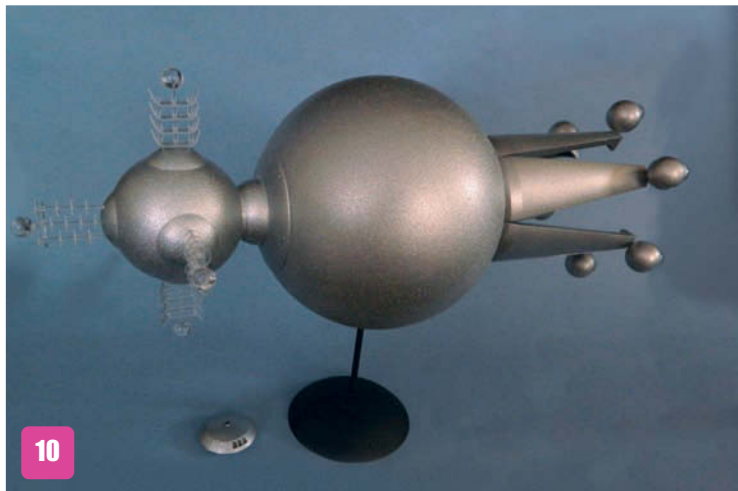
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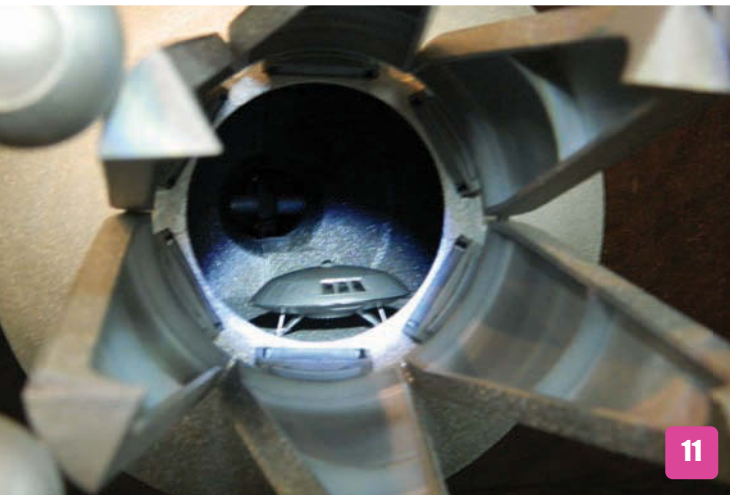
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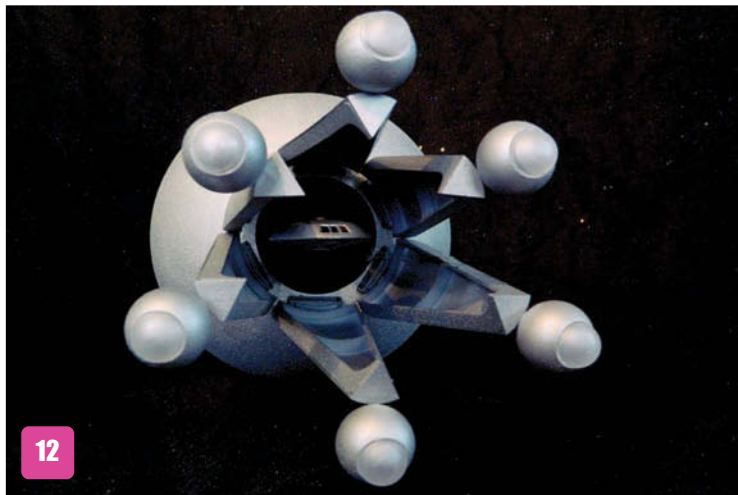
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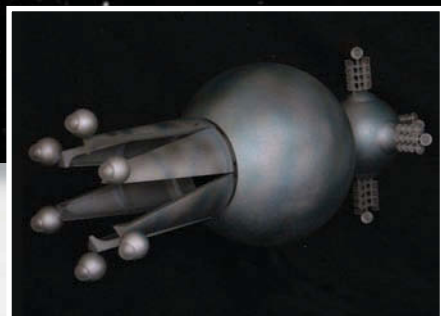
adventures of the *Robinson* family, *Robot* and reluctant stowaway *Dr. Zachary Smith*. For his second entry into science fiction Allen, having previously released *Voyage to the Bottom of the Sea* a year earlier, launched a series that has a strong fan base to this day.

Being a huge Irwin Allen fan, having built the other kits in the *Moebius Lost in Space* line (my custom first season 1/35 *Jupiter 2* was featured in Volume 24 of this publication) and having

discovered that the next kit would be *the Derelict*, an alien vessel the *Robinsons* would encounter in the second broadcast episode, I approached Frank Winspur to offer my services to build a test shot of the kit. I was honoured when Frank and Bob Plant agreed to have me do a build that would also be featured on the kit's box art.

Test shot

The test shot arrived and consisted of main body



(2) parts, front 'head' (2) parts, the 'legs', a clear moulded 1.5" *Jupiter 2* with a choice of a one piece 'in flight' leg configuration or three

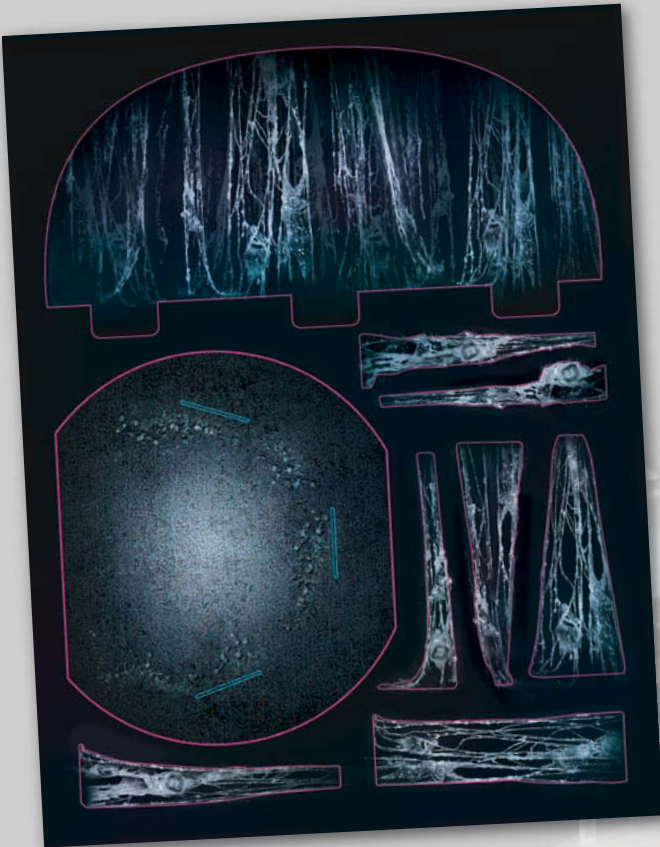
deployed legs and clear moulded antennae sections and leg ball 'end caps'. There was also a metal support rod and a piece of brass to display the mini *Jupiter 2* in orbit around the alien behemoth. [Photos 2-3.]

Because I was working with a test shot, I didn't have an assembly guide, so, using my reference material, I devised a build up plan. Firstly I washed all the parts with a mild liquid detergent to remove any residual mould release, then I began test-fitting the parts. As usual, *Moebius* kits provide an almost perfect fit. At this point I realised that a groove featured along the inside of the main body of *the Derelict* but at this point believed that a floor piece to sit on this would not be provided. I therefore measured the floor area, made a template and cut the piece from sheet styrene, subsequently supplying *Moebius* with the template so other that other modellers could replicate the piece... (*The production kit features a card floor piece plus surrounding walls for those wishing to detail the interior – see image page 92. Ed.*)

After the interior and floor of *the Derelict* had been sprayed in flat black I inserted my floor piece and attached the ring that supports the ship's six legs. Cementing the two halves together I removed the seam lines, doing the same for the head section. [Photo 4.] The six legs were then assembled and sprayed my chosen base colour of textured metallic paint... [Photo 5.]



The model can be displayed in either 'open' or 'closed' configurations, the latter so as to swallow up the *Jupiter 2* as seen in the second episode. The legs are attached by inserting the two pins located on the rear assembly into either set of clips provided. The legs and clips can be easily removed if one chooses to display the legs/doors opened or closed. [Photos 6-7.]



The assembled model was then readied for airbrush detailing. [Photo 10.] Before attaching the remaining clear parts (the antennae and clear caps for the ball parts on the legs) I airbrushed, using my *Iwata* system, patterns and differing silvers on the hull to reflect the detailing seen on the original miniature.

Opposite:
production kit
interior card
inserts
not provided
with the
featured test
build.

Of course an adventurous modeller will want to light up the *Jupiter 2* – there is plenty of room inside the model for lighting, etc. [Photos 11-12.] – and even, perhaps, have it rotate around *the Derelict*. Although the ship's exterior did not feature lights in the episode, interior lighting could be created to illuminate the interior, and the alien 'cobwebs' seen in the episode could also be added (*See card inserts opposite. Ed.*).

I wish to thank *Moebius* for the test shot and the opportunity to build the newest addition to their growing line of *Lost in Space*/Irwin Allen kits. I had no issues assembling this kit and had a lot of fun doing so. A highly recommended subject and an opportunity to add an unusual design to your kit collection.

The tiny *Jupiter 2* was painted flat black on the inside and *Tamiya Silver* on the outer hull, after carefully masking off the viewport and upper dome. As already mentioned, the ship can be assembled in flight or with the gear deployed. [Photos 8-9.]

Mark Myers

The Third Models

<https://www.facebook.com/pages/The-Third-Models/251549648289041>.

The *Derelict* is sighted through the viewports of Mark's *Jupiter II* build.



Watch the Birdie!

Andy Pearson creates a fantasy mid-air confrontation

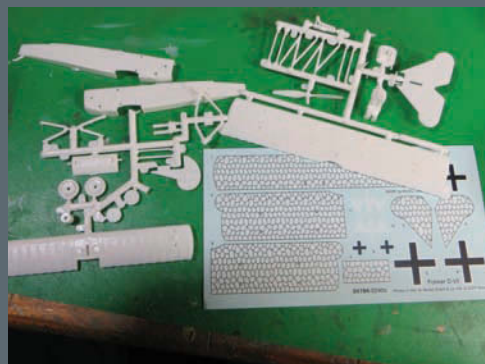
HAVING BEEN AN AVID COLLECTOR OF ANYTHING RELATED TO MODEL ANIMATION SINCE GOODNESS KNOWS WHEN, I was aware of a project that, although unrealised, seemed to be close to the heart of the late Willis O'Brien. That was *War Eagles*, for which a number of production sketches and notes exist.

Now I am not an animator as my only attempt proved. This entailed building a dragon over a wire armature and attempting to animate it using a conventional video camera. The result was a soft-

focus mythical creature jumping up and down on the spot for about five seconds before the camera's shutter gave up the struggle and another piece of reasonably expensive electrical equipment hit the recycling centre. A lost screen gem it was not.

Another area in which my ambitions often exceed my abilities is sculpting but I persist in trying to improve my techniques and I was prompted to try a *War Eagles*-based model by a neighbour. The lady in question had become aware of my interest in model building through the local

Below—top row: The donor aircraft kit. Biplane parts from the box. Early painting and assembly stage. Centre row: Further assembly. Pilot figure with paint. Eagle rider following surgery and prior to painting. Bottom row: Eagle armature construction stages.





Top row: Completed armature. Eagle rider with paint. Completed aircraft pre-weathering.
Above: Clay base layer to armature. Making the feathers and the tools of the trade. Adding feathers to base layer.

bush telegraph and said that her friend would like a model of a golden eagle. This may have been post-pub as I immediately agreed to make her one provided she stopped setting her dog on me. The result was reasonably successful and well received and so the seeds were sown.

Now it wasn't my intention to simply do another big bird, suitably accessorised, but to put said winged creature into a dynamic setting and so an aerial battle with an aircraft sounded like a prospect. Browsing the shelves of a local hobbies superstore I came across a *Revell Fokker D VII* kit in 1:72 scale which looked the part for the opposition in the struggle and had the advantage that this particular biplane didn't feature much in the way of rigging.

With the kit to hand and the eagle sculpt in mind I set about producing a few sketches and considering how best to simulate aerial combat. My first thought was to present the protagonists in flight above a pine forest with a wing tip of the eagle just skimming the top of one tree. Said tree would conceal within its trunk a wire support which would run into the wing of the bird, supported there by the armature.

The only wire with which I work is the brass variety which is, by its very nature, fairly malleable

and would not have the load-bearing properties I needed. I'm fortunate to live on the edge of an agricultural area which offers access to some rural crafts not readily available to the city dweller and, amongst these, is *Risley Forge* which is run by one Philip Gannon, a very nice man and an expert in all things metallurgical.

We'd had some dealings in the past and he was aware of my interests so expressed no great surprise when I turned up at his work place brandishing the armature for an eagle and a small model tree. His suggestion was to use stainless steel wire which had a certain rigidity and of which he provided me a length free, gratis and for nothing – hence the plug.

The armature itself was made from florist's wire which appears to be an aluminium product and is easily manipulated. Once I had the basic pose I required, the wire armature was wrapped in the aluminium mesh that's sold for car body repairs, that being strengthened and held in place by strips of black *Milliput*. That choice was dictated simply by having some in stock as a result of repairing a young lady's guitar before her dad found out that she had dropped and damaged it, although who in their right mind buys a thirteen year old a *Gibson* as their first instrument I don't know – but I digress.

The armature was then given its first thin skin using the firm grey formulation of *Super Sculpey* and set aside whilst I began work on the biplane kit. This wasn't due to boredom but it seemed wise to have the aircraft at least partly finished so that I could work out contact points between it and the eagle. Leaving the basic sculpt for a day or two also meant that I could come back and review the pose with fresh eyes.

It's been a very long time since I built a WWI aircraft but, as this one was presented very much as a beginner's model, complete with two pots of paint and a strange two-headed brush, I didn't expect it to present any problems and, indeed, it didn't – although I managed to fit the tail-plane upside down. The pilot supplied was a somewhat lumpen figure (not in the Marxist sense of the word) but I wanted some interesting interaction between him and the eagle. To this end he was replaced with a WWII German infantry officer from a 1:72 scale *Airfix* set.

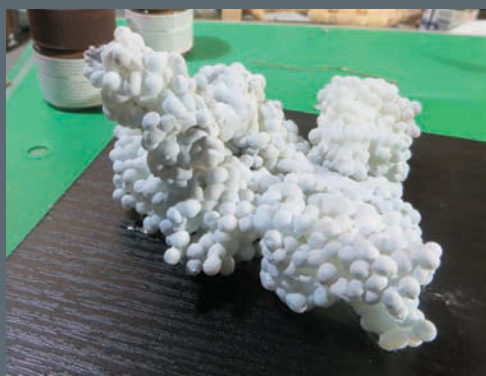
This chap was quite nicely detailed but moulded in some sort of vinyl which didn't take either primer or paint very well and so needed handling with care. I understand that *Games Workshop* do a primer that works well on this material but I was reluctant to buy any for the sake of a single figure.

The finished aircraft was painted in *Tamiya XF-8 Flat Blue*, given a gloss coat, adorned with some decals from the spares box and then over-sprayed with the same manufacturer's flat clear acrylic using my airbrush. This, for some reason, left a misty residue of what I assumed was the flat base but which actually turned out to give a quite nice weathered effect after some manipulation with cotton buds, brushes and weathering powders.

Being in a figure painting frame of mind, I then began work on the eagle's companion. He was based on an *Italeri US Paratrooper* figure and required some surgery. Fortunately he was an injected-moulded job in polystyrene and was relatively easy to carve and chop up in order to reposition his limbs, the better to render him as an eagle rider, which figure subject is not addressed by the leading manufacturers. I'm sure that this oversight will be addressed in the near future.

With these elements completed I returned to the eagle sculpt. Having decided that the pose was about right I began phase two. This was the creation and application of feathers: a great many feathers. Using a book on British birds as a reference, I began to roll feather shapes from small balls of *Sculpey*, which doesn't have quite the same ring as 'great balls of fire' but there you go. These were then textured using a home-made tool that I

Below: Test fit of saddle and blanket. Completed saddle and blanket with paint and some harness items. *Milliput* extensions to talons. Bottom: Fixing the base of the cloud and brass tube support to base. Cloud support with paint. Basic wash to eagle bringing out the feather detail.



normally use to texture hair on sculpts. That consists of several used scalpel blades embedded in a lump of *Milliput*.

The creation of these details was a somewhat time-consuming and repetitive process but its gradual nature helped me build up the eagle's surface texture with a great deal of control. Having said that, I was grateful for the distractions provided by the radio.

After some hours of feather application I turned my attention to creating a saddle for the eagle's rider which was, again, shaped from *Sculpey*. I thought that the equivalent of a horse blanket might add something to the overall picture and the obvious solution was to use a piece of fabric but instead I chose to roll one from the same clay which meant that I could give it some folds. The downside was that it was very fragile.

Back at the sculpted eagle I was now in a position to estimate the final weight of the thing and see if that would affect my plans for its treetop display. Truth to tell, it became obvious that this initial concept was not going to be easy to achieve and that the single strand of stainless steel wire was going to be inadequate. I had strengthened the entry point for the supporting wire into the wing with some pieces of *Milliput* sculpted into feather shapes and so getting another length of wire into the same area was a reasonably easy task. It was whilst I was doing this that I remembered a technique I have described previously in these pages for creating nebulous, cloud-like shapes.

This involves a plastic polymer marketed here in the UK under the name *Polymorph* by the venerable *Fred Aldous* craft and hobby shop in Manchester. It is supplied as polymer beads which, when heated in water to 62°C, are mouldable by hand. The material is similar in appearance to that which is used in hot glue guns and that's what I used to work with it on this occasion. First of all, I inserted a brass tube into the base I had chosen for the model at an angle of around 45°, using hot glue to fix this in place and then building up the *Polymorph* beads to create a stylised cloud. I suppose using cotton wool as simulated cloud

Top to bottom: Picking out individual feathers on top of base coat of ink. Hi-tech supporting rig used whilst fixing eagle to aircraft. Where talons meet 'fabric' wings. Work in progress. Note slight clouding from CA adhesive.

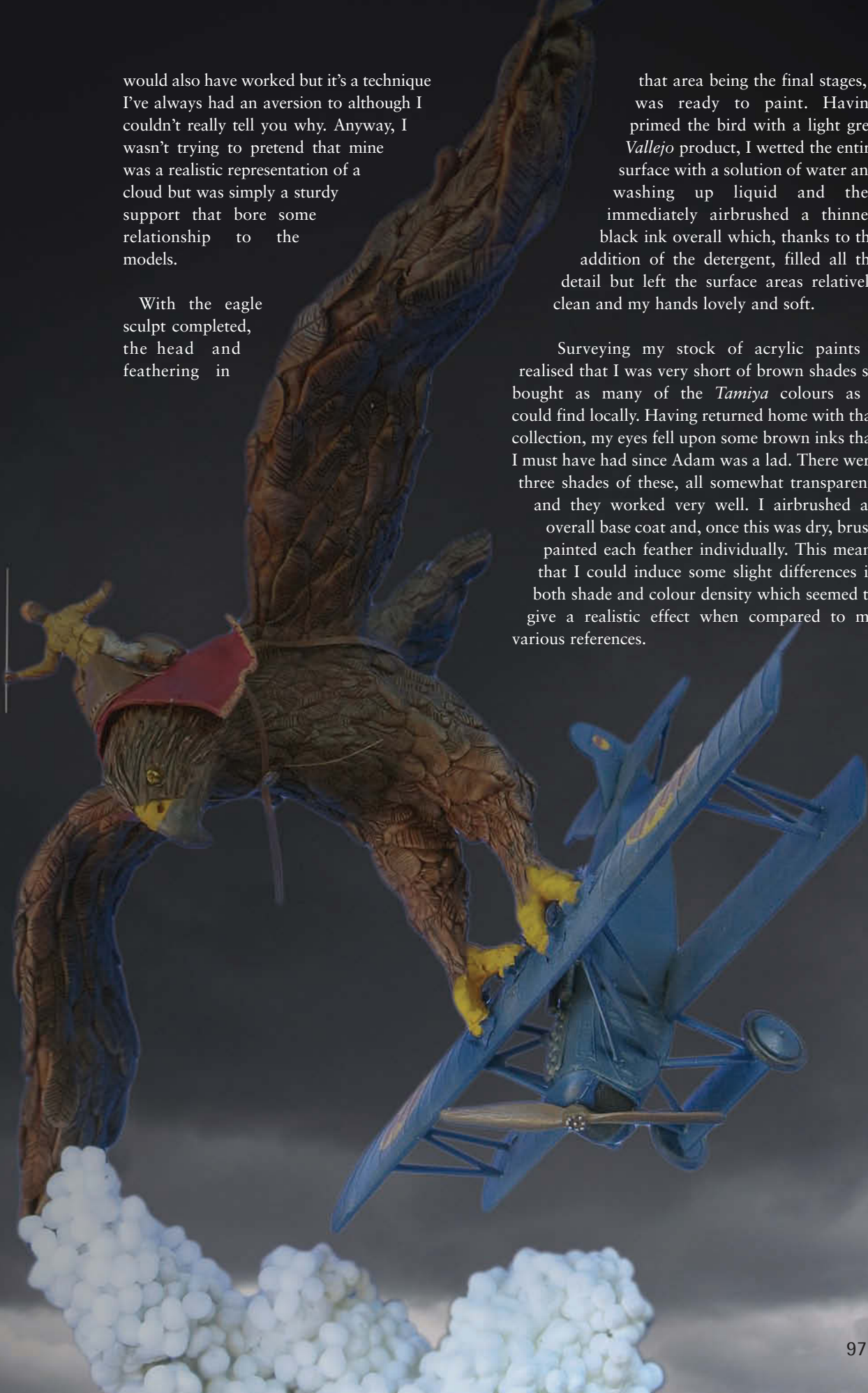


would also have worked but it's a technique I've always had an aversion to although I couldn't really tell you why. Anyway, I wasn't trying to pretend that mine was a realistic representation of a cloud but was simply a sturdy support that bore some relationship to the models.

With the eagle sculpt completed, the head and feathering in

that area being the final stages, I was ready to paint. Having primed the bird with a light grey Vallejo product, I wetted the entire surface with a solution of water and washing up liquid and then immediately airbrushed a thinned black ink overall which, thanks to the addition of the detergent, filled all the detail but left the surface areas relatively clean and my hands lovely and soft.

Surveying my stock of acrylic paints I realised that I was very short of brown shades so bought as many of the *Tamiya* colours as I could find locally. Having returned home with that collection, my eyes fell upon some brown inks that I must have had since Adam was a lad. There were three shades of these, all somewhat transparent, and they worked very well. I airbrushed an overall base coat and, once this was dry, brush painted each feather individually. This meant that I could induce some slight differences in both shade and colour density which seemed to give a realistic effect when compared to my various references.



Positioning the eagle's talons in such a way that they appeared to be penetrating the fabric of the biplane's upper wing was a little tricky. I sculpted foreshortened talons and then added extensions made of *Milliput* and, when this had enjoyed a couple of hours in which to begin setting, I was able to press the talon ends onto the wing so that the *Milliput* conformed to the contours. Were I to do this again, I would use the same technique but on the wing before the model aircraft was assembled.

The talons were finally fixed to the wing using *Zap-A-Gap medium CA+* which also acted as a final stage filler. Some further painting of the wing area and the talons was needed as the superglue had created a white 'fogging' as it sometime does when used in quantity. To enhance the illusion of talon entering wing, I airbrushed some blue tissue paper in the same blue as the biplane and then used a thin PVA to glue tiny torn sections of this round the areas where eagle talon met wing.

The saddle and saddle blanket had been kept as a separate component and these had various straps and harnesses, made from thin polythene, added and then the whole thing was glued to the eagle's neck to be followed by the eagle's rider who, when glued in place, had tissue paper strip stirrups added. These might have been the same ones used by that infamous outlaw character of the Old West, the Tissue Paper Kid, who wore an outfit made entirely from that same and was wanted for rustling.

Now – and primarily for the benefit of those readers who are members of the *Andy Cocks It Up Again* club – I come to the two final stages. First of all the biplane's pilot figure had needed a degree of force to bend his tiny vinyl legs into the cockpit, which fact I had forgotten until the whole model was assembled. It soon became obvious that force wasn't going to be an option anymore and so I had to amputate his legs above the knee. Not a major problem but it meant that the paint which, as I mentioned earlier, has a very tenuous grip on the figure, came away in flakes so some retouching was required.

I also realised that the sturdy supporting mechanism I had created wasn't quite a resilient as I'd hoped and that, over a period of hours, both eagle and biplane were sinking slowly in the west. To quote the late Kurt Vonnegut: 'So it goes'. I'm hoping that the addition of more *Polymorph* cloud cover will overcome this problem.



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